

10/8/2011

=> file registry
FILE 'REGISTRY' ENTERED AT 11:05:21 ON 28 AUG 2009
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 26 AUG 2009 HIGHEST RN 1176333-21-3
DICTIONARY FILE UPDATES: 26 AUG 2009 HIGHEST RN 1176333-21-3

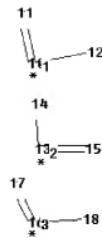
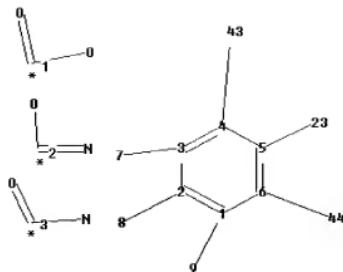
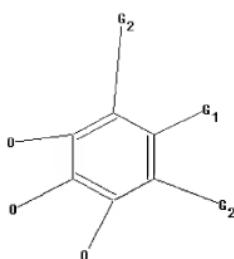
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TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>
Uploading L1.str

 $H^* 4$ $24^* 4$ $X^* 5$ $21^* 5$ $* 6 \cdots \cdots \cdots N$ $* 6 \cdots \cdots \cdots 28$ $* 7 \cdots \cdots \cdots S$ $* 7 \cdots \cdots \cdots 29 \cdots \cdots 27$ $CH^* 8$ $32^* 8$ $alk^* 9$ $33^* 9$ $cb^* 10$ $34^* 10$

chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 23 24 25 26 27 28 29 30 31
32 33 34 43 44

ring nodes :

1 2 3 4 5 6

chain bonds :

1-9 2-8 3-7 4-43 5-23 6-44 10-11 10-12 13-14 13-15 16-17 16-18 26-28
27-29 28-30 29-31

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

1-9 2-8 3-7 4-43 5-23 6-44 10-11 10-12 13-14 13-15 16-17 16-18 26-28
27-29 28-30 29-31

normalized bonds :

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1-2 1-6 2-3 3-4 4-5 5-6

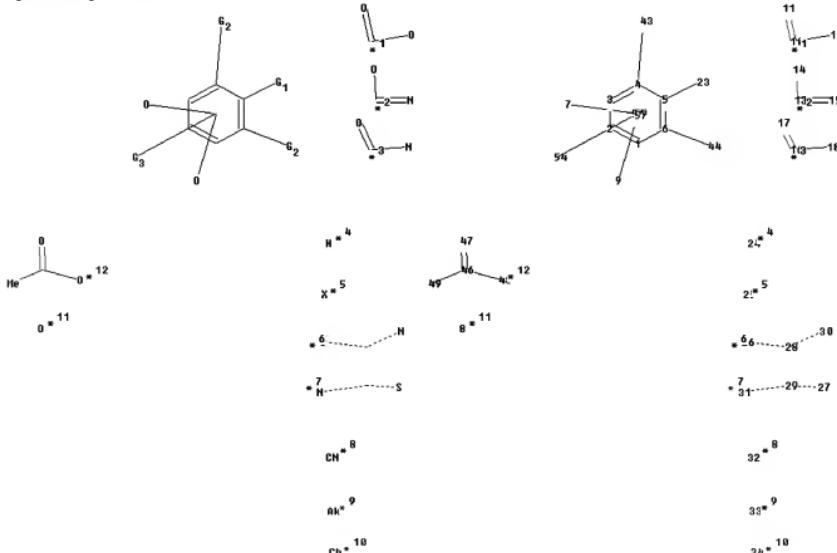
G1:[*1], [*2], [*3]

G2:[*4], [*5], [*6], [*7], [*8], [*9], [*10]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
23:CLASS 24:CLASS
25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS
33:CLASS 34:Atom
43:CLASS 44:CLASS

Uploading L2.str



chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 23 24 25 26 27 28 29 30 31
32 33 34 43 44 46 47 48 49 54

ring nodes :

1 2 3 4 5 6

chain bonds :

4-43 5-23 6-44 10-11 10-12 13-14 13-15 16-17 16-18 26-28 27-29 28-30
29-31 46-47 46-48 46-49

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

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4-43 5-23 6-44 10-11 10-12 13-14 13-15 16-17 16-18 26-28 27-29 28-30
29-31 46-47 46-48
exact bonds :
46-49
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

G1:[*1],[*2],[*3]

G2:[*4],[*5],[*6],[*7],[*8],[*9],[*10]

G3:[*11],[*12]

Connectivity :

8:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
23:CLASS 24:CLASS
25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS
33:CLASS 34:Atom
43:CLASS 44:CLASS 46:CLASS 47:CLASS 48:CLASS 49:CLASS 54:CLASS 55:CLASS
56:CLASS 57:CLASS

=> file zcplus
FILE 'ZCPLUS' ENTERED AT 11:05:23 ON 28 AUG 2009
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FILE COVERS 1907 - 28 Aug 2009 VOL 151 ISS 10
FILE LAST UPDATED: 27 Aug 2009 (20090827/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

ZCplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

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The ALL, BIB, MAX, and STD display formats in the CA/CAplus family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 9.

'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCPLUS' FILE

```
=> d stat que L28
L1          STR
```

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L5	6619	SEA FILE=REGISTRY SSS FUL L1 AND L2
L6	26435	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L5
L20	959	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?SAFENER?/BI
L28	2	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L6 AND L20

```
=> d stat que L31
L1          STR
```

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L5	6619	SEA FILE=REGISTRY SSS FUL L1 AND L2
L6	26435	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L5
L22	7342	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?ANTIDOTE?/BI
L23	353363	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON 5/CC,SX,SC
L30	15	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L6 AND L22
L31	3	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L30 AND L23

```
=> d stat que L59
L1          STR
```

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L5	6619	SEA FILE=REGISTRY SSS FUL L1 AND L2
L6	26435	SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L5
L8	4	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (1132-21-4/BI OR 141112-29-0/BI OR 173159-57-4/BI OR 530-57-4/BI)
L9	1	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 141112-29-0

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L10 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 173159-57-4
L11 2 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (L9 OR L10)
L12 1573854 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?PLANT?/BI
L13 374345 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?SEED?/BI
L14 222949 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?PROPAGAT?/BI
L15 95842 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?HERBICID?/BI
L16 610849 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?ICID?/BI
L17 13955 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?BIOCID?/BI
L18 67493 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON AGRO?/BI
L19 99601 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON AGRI?/BI
L21 63339 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?ADJUVANT?/BI
L23 353363 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON 5/CC, SX, SC
L24 462 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L11
L25 298 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?PHYTOCID?/BI
L26 25907 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON WEED CONTROL?/BI
L27 268 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON WEEDICID?/BI
L32 5730 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L6 AND ((L12 OR L13
OR L14 OR L15 OR L17 OR L18 OR L19) OR L21 OR (L23 OR
L24 OR L25 OR L26 OR L27))
L33 1295 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L32 AND P/DT
L34 4435 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L32 NOT L33
L36 635 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L33 AND PRD<20030326
L37 620 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L33 AND AD<20030326
L38 541 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L33 AND PD<20030326
L41 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L8 AND 5/0
L43 136 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L5 (L) AGR/RL
L44 95 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L43 AND P/DT
L45 41 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L43 NOT L44
L47 41 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L44 AND PRD<20030326
L48 30 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L44 AND PD<20030326
L49 41 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L44 AND AD<20030326
L54 2709 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L34 AND PY<2003
L55 3379 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L54 OR (L36 OR L37 OR
L38)
L56 17 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L45 AND PY<2003
L57 58 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L56 OR (L47 OR L48 OR
L49)
L58 3381 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L55 OR L57
L59 12 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L58 AND (L41 (L)
AGR/RL)

=> d stat que L81
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L5 6619 SEA FILE=REGISTRY SSS FUL L1 AND L2
L6 26435 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L5
L8 4 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (1132-21-4/BI OR
141112-29-0/BI OR 173159-57-4/BI OR 530-57-4/BI)
L9 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 141112-29-0
L10 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 173159-57-4
L11 2 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (L9 OR L10)

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L12	1573854	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?PLANT?/BI
L13	374345	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?SEED?/BI
L14	222949	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?PROPAGAT?/BI
L15	95842	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?HERBICID?/BI
L16	610849	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?ICID?/BI
L17	13955	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?BIOCID?/BI
L18	67493	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	AGRO?/BI
L19	99601	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	AGRI?/BI
L21	63339	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?ADJUVANT?/BI
L23	353363	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	5/CC, SX, SC
L24	462	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L11
L25	298	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?PHYTOCID?/BI
L26	25907	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	WEED CONTROL?/BI
L27	268	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	WEEDICID?/BI
L32	5730	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L6 AND ((L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19) OR L21 OR (L23 OR L24 OR L25 OR L26 OR L27))
L33	1295	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L32 AND P/DT
L34	4435	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L32 NOT L33
L36	635	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND PRD<20030326
L37	620	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND AD<20030326
L38	541	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND PD<20030326
L41	1	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	L8 AND 5/0
L43	136	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L5 (L) AGR/RL
L44	95	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L43 AND P/DT
L45	41	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L43 NOT L44
L47	41	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L44 AND PRD<20030326
L48	30	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L44 AND PD<20030326
L49	41	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L44 AND AD<20030326
L54	2709	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L34 AND PY<2003
L55	3379	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L54 OR (L36 OR L37 OR L38)
L56	17	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L45 AND PY<2003
L57	58	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L56 OR (L47 OR L48 OR L49)
L58	3381	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L55 OR L57
L62	39073	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	ZEA MAYS?/BI
L63	31320	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	TRITICUM AESTIVUM/BI
L64	18095	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	SORGHUM/BI
L65	4291	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	SECALE CEREALE/BI
L66	5269	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	PANICUM/BI
L67	16049	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	HORDEUM VULGARE/BI
L68	2362	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	FAGOPYRUM ESCULENTUM/B I
L69	47260	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	CEREAL?/BI
L70	57166	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	BARLEY?/BI
L71	24491	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	BRAN/BI
L72	143166	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	CORN/BI
L73	45485	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	ORYZA SATIVA/BI
L74	118899	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	RICE/BI
L75	130626	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	COTTON/BI
L76	139287	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	SOYBEAN?/BI
L77	390	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L58 AND (L62 OR L63 OR L64 OR L65 OR L66 OR L67 OR L68 OR L69 OR L70 OR L71 OR L72 OR L73 OR L74 OR L75 OR L76)
L79	300	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L41 (L) USES/RL
L80	8	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L77 AND L79
L81	2	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L80 AND L23

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=> d stat que L82
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L5 6619 SEA FILE=REGISTRY SSS FUL L1 AND L2
L6 26435 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L5
L8 4 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON (1132-21-4/B1 OR
141112-29-0/B1 OR 173159-57-4/B1 OR 530-57-4/B1)
L9 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 141112-29-0
L10 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 173159-57-4
L11 2 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (L9 OR L10)
L12 1573854 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?PLANT?/BI
L13 374345 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?SEED?/BI
L14 222949 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?PROPAGAT?/BI
L15 95842 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?HERBICID?/BI
L16 610849 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?ICID?/BI
L17 13955 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?BIOCID?/BI
L18 67493 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON AGRO?/BI
L19 99601 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON AGR?/BI
L21 63339 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?ADJUVANT?/BI
L23 353363 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON 5/CC, SX, SC
L24 462 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L11
L25 298 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ?PHYTOCID?/BI
L26 25907 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON WEED CONTROL?/BI
L27 268 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON WEEDICID?/BI
L32 5730 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L6 AND ((L12 OR L13
OR L14 OR L15 OR L16 OR L17 OR L18 OR L19) OR L21 OR (L23 OR
L24 OR L25 OR L26 OR L27))
L33 1295 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L32 AND P/DT
L34 4435 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L32 NOT L33
L36 635 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L33 AND PRD<20030326
L37 620 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L33 AND AD<20030326
L38 541 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L33 AND PD<20030326
L41 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L8 AND 5/O
L43 136 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L5 (L) AGR/RL
L44 95 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L43 AND P/DT
L45 41 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L43 NOT L44
L47 41 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L44 AND PRD<20030326
L48 30 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L44 AND PD<20030326
L49 41 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L44 AND AD<20030326
L54 2709 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L34 AND PY<2003
L55 3379 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L54 OR (L36 OR L37 OR
L38)
L56 17 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L45 AND PY<2003
L57 58 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L56 OR (L47 OR L48 OR
L49)
L58 3381 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON L55 OR L57
L62 39073 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON ZEA MAYS?/BI
L63 31320 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON TRITICUM AESTIVUM/BI
L64 18095 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON SORGHUM/BI
L65 4291 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON SECALE CEREALE/BI
L66 5269 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON PANICUM/BI
L67 16049 SEA FILE=ZCPLUS SPE=ON ABB=ON PLU=ON HORDEUM VULGARE/BI

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L68	2362	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	FAGOPYRUM	ESCULENTUM/B
		I					
L69	47260	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	CEREAL?/BI	
L70	57166	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	BARLEY?/BI	
L71	24491	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	BRAN/BI	
L72	143166	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	CORN/BI	
L73	45485	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	ORYZA SATIVA/BI	
L74	118899	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	RICE/BI	
L75	130626	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	COTTON/BI	
L76	139287	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	SOYBEAN?/BI	
L77	390	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L58 AND (L62 OR L63 OR L64 OR L65 OR L66 OR L67 OR L68 OR L69 OR L70 OR L71 OR L72 OR L73 OR L74 OR L75 OR L76)	
L79	300	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L41 (L) USES/RL	
L80	8	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L77 AND L79	
L82	3	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L80 AND 3/CC	

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L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L5	6619	SEA FILE=REGISTRY	SSS FUL	L1 AND L2			
L6	26435	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L5	
L9	1	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	141112-29-0	
L10	1	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	173159-57-4	
L11	2	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	(L9 OR L10)	
L12	1573854	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?PLANT?/BI	
L13	374345	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?SEED?/BI	
L14	222949	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?PROPAGAT?/BI	
L15	95842	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?HERBICID?/BI	
L16	610849	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?ICID?/BI	
L17	13955	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?BIOCID?/BI	
L18	67493	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	AGRO?/BI	
L19	99601	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	AGRI?/BI	
L21	63339	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?ADJUVANT?/BI	
L23	353363	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	5/CC, SX, SC	
L24	462	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L11	
L25	298	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	?PHYTOCID?/BI	
L26	25907	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	WEED CONTROL?/BI	
L27	268	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	WEEDICID?/BI	
L32	5730	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L6 AND ((L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19) OR L21 OR (L23 OR L24 OR L25 OR L26 OR L27))	
L33	1295	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L32 AND P/DT	
L34	4435	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L32 NOT L33	
L36	635	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND PRD<20030326	
L37	620	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND AD<20030326	
L38	541	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND PD<20030326	
L43	136	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L5 (L) AGR/RL	
L44	95	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L43 AND P/DT	
L45	41	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L43 NOT L44	
L47	41	SEA FILE=ZCPLUS	SPE=ON	ABB=ON	PLU=ON	L44 AND PRD<20030326	

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L48	30	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L44 AND PD<20030326
L49	41	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L44 AND AD<20030326
L54	2709	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L34 AND PY<2003
L55	3379	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L54 OR (L36 OR L37 OR L38)
L56	17	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L45 AND PY<2003
L57	58	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L56 OR (L47 OR L48 OR L49)
L58	3381	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L55 OR L57
L62	39073	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	ZEA MAYS/?BI
L63	31320	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	TRITICUM AESTIVUM/B1
L64	18095	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	SORGHUM/B1
L65	4291	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	SECALE CERALE/B1
L66	5269	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	PANICUM/B1
L67	16049	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	HORDEUM VULGARE/B1
L68	2362	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	FAGOPYRUM ESCULENTUM/B1
L69	47260	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	CEREAL/?BI
L70	57166	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	BARLEY/?BI
L71	24491	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	BRAN/B1
L72	143166	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	CORN/B1
L73	45485	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	ORYZA SATIVA/B1
L74	118899	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	RICE/B1
L75	130626	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	COTTON/B1
L76	139287	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	SOYBEAN/?BI
L77	390	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L58 AND (L62 OR L63 OR L64 OR L65 OR L66 OR L67 OR L68 OR L69 OR L70 OR L71 OR L72 OR L73 OR L74 OR L75 OR L76)
L83	9058	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L5 (L) USES/RL
L84	89	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L83 AND L77
L85	10	SEA FILE=ZCPLUS SPE=ON	ABB=ON	PLU=ON	L84 AND L23

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L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L5	6619	SEA FILE=REGISTRY SSS FUL	L1 AND L2
L6	26435	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON L5
L9	1	SEA FILE=REGISTRY SPE=ON	ABB=ON PLU=ON 141112-29-0
L10	1	SEA FILE=REGISTRY SPE=ON	ABB=ON PLU=ON 173159-57-4
L11	2	SEA FILE=REGISTRY SPE=ON	ABB=ON PLU=ON (L9 OR L10)
L12	1573854	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON ?PLANT/?BI
L13	374345	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON ?SEED/?BI
L14	222949	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON ?PROPAGAT/?BI
L15	95842	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON ?HERBICID/?BI
L16	610849	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON ?ICID/?BI
L17	13955	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON ?BIOCID/?BI
L18	67493	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON AGRO/?BI
L19	99601	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON AGRI/?BI
L21	63339	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON ?ADJUVANT/?BI
L23	353363	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON 5/CC, SX, SC
L24	462	SEA FILE=ZCPLUS SPE=ON	ABB=ON PLU=ON L11

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L25	298	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	?PHYTOCID?/BI
L26	25907	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	WEED CONTROL?/BI
L27	268	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	WEEDICID?/BI
L32	5730	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L6 AND ((L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19) OR L21 OR (L23 OR L24 OR L25 OR L26 OR L27))
L33	1295	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L32 AND P/DT
L34	4435	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L32 NOT L33
L36	635	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND PRD<20030326
L37	620	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND AD<20030326
L38	541	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L33 AND PD<20030326
L43	136	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L5 (L) AGR/RL
L44	95	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L43 AND P/DT
L45	41	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L43 NOT L44
L47	41	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L44 AND PRD<20030326
L48	30	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L44 AND PD<20030326
L49	41	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L44 AND AD<20030326
L54	2709	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L34 AND PY<2003
L55	3379	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L54 OR (L36 OR L37 OR L38)
L56	17	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L45 AND PY<2003
L57	58	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L56 OR (L47 OR L48 OR L49)
L58	3381	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L55 OR L57
L62	39073	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	ZEA MAYS?/BI
L63	31320	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	TRITICUM AESTIVUM/BI
L64	18095	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	SORGHUM/BI
L65	4291	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	SECALE CEREALE/BI
L66	5269	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	PANICUM/BI
L67	16049	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	HORDEUM VULGARE/BI
L68	2362	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	FAGOPYRUM ESCULENTUM/B I
L69	47260	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	CEREAL?/BI
L70	57166	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	BARLEY?/BI
L71	24491	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	BRAN/BI
L72	143166	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	CORN/BI
L73	45485	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	ORYZA SATIVA/BI
L74	118899	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	RICE/BI
L75	130626	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	COTTON/BI
L76	139287	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	SOYBEAN?/BI
L77	390	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L58 AND (L62 OR L63 OR L64 OR L65 OR L66 OR L67 OR L68 OR L69 OR L70 OR L71 OR L72 OR L73 OR L74 OR L75 OR L76)
L86	5	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L77 AND (L26 OR L27)
L87	1	SEA FILE=ZCAPLUS	SPE=ON	ABB=ON	PLU=ON	L86 AND NEW GROWTH/TI

=> s L28 or L31 or L59 or L81 or L82 or L85 or L87
L92 27 L28 OR L31 OR L59 OR L81 OR L82 OR L85 OR L87

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L92 ANSWER 1 OF 27 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:1294726 ZCAPLUS Full-text
DOCUMENT NUMBER: 147:481471
ENTRY DATE: Entered STN: 15 Nov 2007
TITLE: Process for soybean seed treatment
INVENTOR(S): Piscorscaia, Valentina; Siscanu, Gheorghe; Stefirta,
 Anastasia; Turtă, Constantin; Zubarev, Vera

10/810211

PATENT ASSIGNEE(S): Institutul de Fiziologie a Plantelor Al Academiei de
Stiinte A Republicii Moldova, Moldova; Institutul de
Chimie Al Academiei de Stiinte A Republicii Moldova
SOURCE: Mold., 8pp.
CODEN: MDXXCZ
DOCUMENT TYPE: Patent
LANGUAGE: Moldavian
INT. PATENT CLASSIF.:
MAIN: A01C001-00
SECONDARY: A01N055-00
CLASSIFICATION: 5-3 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
MD 1386	F1	20000131	MD 1999-103	19990325 <--
PRIORITY APPLN. INFO.:			MD 1999-103	19990325 <--
PATENT CLASSIFICATION CODES:				
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
MD 1386	ICM	A01C001-00		
	ICS	A01N055-00		
	IPCI	A01C0001-00 [ICM,7]; A01N0055-00 [ICS,7]		
	IPCR	A01C0001-00 [I,C*]; A01C0001-00 [I,A]; A01N0055-00 [I,C*]; A01N0055-00 [I,A]		

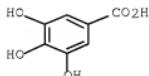
ABSTRACT:

The claimed method for presowing soybean seed treatment involves use of 0.0001-0.001% aqueous solution of potassium gallate with formula KC7H5O4 x 0.25 C7H6O5 x 1.5H2O. The agent is prepared by reaction of gallic acid with K acetate in methanol at room temperature; the mixture is agitated until the clear solution yields precipitate with .apprx.50% yield. The product was characterized by elemental anal., summary formula, and IR spectroscopy. The seed treatment increases soybean yields.

SUPPL. TERM: soybean seed presowing treatment potassium gallate synthesis
INDEX TERM: Glycine max
 Soybean
 (process for soybean seed presowing
 treatment with potassium gallate to increase grain
 yields)
INDEX TERM: 17103-65-0P, Potassium gallate
 ROLE: AGR (Agricultural use); SPN (Synthetic
 preparation); BIOL (Biological study); PREP (Preparation);
 USES (Uses)
 (process for soybean seed presowing
 treatment with potassium gallate to increase grain
 yields)
INDEX TERM: 127-08-2, Potassium acetate 149-91-7, Gallic
 acid, reactions
 ROLE: RCT (Reactant); RACT (Reactant or reagent)
 (process for soybean seed presowing
 treatment with potassium gallate to increase grain
 yields)
IT 17103-65-0P, Potassium gallate
RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL
(Biological study); PREP (Preparation); USES (Uses)
 (process for soybean seed presowing treatment with

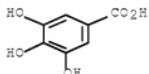
10/810211

potassium gallate to increase grain yields)
RN 17103-65-0 ZCPLUS
CN Benzoic acid, 3,4,5-trihydroxy-, potassium salt (1:1) (CA INDEX NAME)



● K

IT 149-91-7, Gallic acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for soybean seed presowing treatment with
potassium gallate to increase grain yields)
RN 149-91-7 ZCPLUS
CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



L92 ANSWER 2 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:423693 ZCPLUS Full-text
DOCUMENT NUMBER: 142:458552
ENTRY DATE: Entered STN: 19 May 2005
TITLE: Strobilurine fungicides with ethylene modulators
INVENTOR(S): Harden, John S.; Begliomini, Edson; Bardinelli, Ted R.; Everson, Albert C.; Ypema, Hendrik; Holt, Thomas J.; Jawierucha, Joseph E.; Westberg, Dan E.; Rademacher, Wilhelm
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A01N
CLASSIFICATION: 5-2 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005044002	A2	20050519	WO 2004-EP12514	20041105
WO 2005044002	A3	20050721		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LR, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
 SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG

AU 2004286794 A1 20050519 AU 2004-286794 20041105
 CA 2544339 A1 20050519 CA 2004-2544339 20041105
 EP 1681931 A2 20060726 EP 2004-797635 20041105
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LT, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS
 CN 1878468 A 20061213 CN 2004-80032917 20041105
 BR 2004016265 A 20070109 BR 2004-16265 20041105
 JP 2007510631 T 20070426 JP 2006-537257 20041105
 MX 2006004578 A 20060720 MX 2006-4578 20060425
 KR 2006113915 A 20061103 KR 2006-708704 20060504
 US 20070093389 A1 20070426 US 2006-578333 20060504
 ZA 2006004569 A 20080528 ZA 2006-4569 20060605
 IN 2006CN02002 A 20070608 IN 2006-CN2002 20060607
 PRIORITY APPLN. INFO.: US 2003-517883P P 20031107
 WO 2004-EP12514 W 20041105

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005044002	ICM	A01N
	IPCI	A01N [ICM,7]
	IPCR	A01N0037-44 [I,C*]; A01N0037-50 [I,A]; A01N0047-10 [I,C*]; A01N0047-24 [I,A]
	ECLA	A01N037/50+M; A01N047/24+M
AU 2004286794	IPCI	A01N0037-44 [I,C*]; A01N0047-10 [I,C*]; A01N0037-50 [I,A]; A01N0047-24 [I,A]
	IPCR	A01N0037-44 [I,C*]; A01N0037-50 [I,A]; A01N0047-10 [I,C*]; A01N0047-24 [I,A]
	ECLA	A01N037/50+M; A01N047/24+M
CA 2544339	IPCI	A01N0027-00 [I,A]; A01N0033-04 [I,A]; A01N0033-00 [I,C*]; A01N0037-36 [I,A]; A01N0037-40 [I,A]; A01N0037-42 [I,A]; A01N0037-44 [I,A]; A01N0037-50 [I,A]; A01N0043-40 [I,A]; A01N0043-34 [I,C*]; A01N0043-54 [I,A]; A01N0043-48 [I,C*]; A01N0043-653 [I,A]; A01N0043-64 [I,C*]; A01N0043-828 [I,A]; A01N0043-88 [I,A]; A01N0043-72 [I,C*]; A01N0047-24 [I,A]; A01N0047-10 [I,C*]; A01N0059-16 [I,A]; A01N0061-00 [I,A]
	IPCR	A01N0047-10 [I,C]; A01N0047-24 [I,A]; A01N0027-00 [I,C]; A01N0027-00 [I,A]; A01N0033-00 [I,C]; A01N0033-04 [I,A]; A01N0037-36 [I,C]; A01N0037-36 [I,A]; A01N0037-40 [I,A]; A01N0037-42 [I,C]; A01N0037-42 [I,A]; A01N0037-44 [I,C]; A01N0037-44 [I,A]; A01N0037-50 [I,A]; A01N0043-34 [I,C]; A01N0043-40 [I,A]; A01N0043-48 [I,C]; A01N0043-54 [I,A]; A01N0043-64 [I,C]; A01N0043-653 [I,A]; A01N0043-72 [I,C]; A01N0043-828 [I,A]; A01N0043-88 [I,A]; A01N0059-16 [I,C]; A01N0059-16 [I,A]; A01N0061-00 [I,C]; A01N0061-00 [I,A]
	ECLA	A01N037/50+M; A01N047/24+M
EP 1681931	IPCI	A01N0047-24 [ICM,7]; A01N0047-10 [ICM,7,C*]; A01N0043-88 [ICS,7]; A01N0043-72 [ICS,7,C*];

			A01N0043-54 [ICS, 7]; A01N0043-48 [ICS, 7, C*]; A01N0043-40 [ICS, 7]; A01N0043-34 [ICS, 7, C*]; A01N0037-50 [ICS, 7]; A01N0037-44 [ICS, 7, C*]; A01N0047-10 [I, C]; A01N0047-24 [I, A]; A01N0037-44 [I, C]; A01N0037-50 [I, A]; A01N0043-34 [I, C]; A01N0043-40 [I, A]; A01N0043-48 [I, C]; A01N0043-54 [I, A]; A01N0043-72 [I, C]; A01N0043-88 [I, A]
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BR 2004016265		IPC	A01N0047-24 [ICS, 7]; A01N0047-10 [ICS, 7, C*]; A01N0037-50 [ICS, 7]; A01N0037-44 [ICS, 7, C*]; A01N0043-40 [ICS, 7]; A01N0043-34 [ICS, 7, C*]; A01N0043-54 [ICS, 7]; A01N0043-48 [ICS, 7, C*]; A01N0043-88 [ICS, 7]; A01N0043-72 [ICS, 7, C*]
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10/810211

US 20070093389 IPCI A01N0063-00 [I,A]; A01N0025-00 [I,A]; A01N0055-02 [I,A]; A01N0055-00 [I,C*]; A01N0033-24 [I,A]; A01N0033-00 [I,C*]
NCL 504/116.100; 504/118.000; 514/184.000; 514/501.000;
514/640.000
ZA 2006004569 IPCI A01N [I,S]; A01N0037-44 [I,C*]; A01N0037-50 [I,A];
IPCR A01N 0047-10 [I,C*]; A01N0047-24 [I,A]
ECLA A01N037/50+M; A01N047/24+M
IN 2006CN02002 IPCI A01N [ICM,7]
OTHER SOURCE(S): MARPAT 142:458552

ABSTRACT:

The invention relates to mixts. comprising known strobilurines (azoxystrobin, dimoxystrobin, fluoxastrobin, etc.) and ethylene modulators selected from inhibitors of ethylene biosynthesis which inhibit the conversion of S-adenosyl-L-methionine into ACC, inhibitors of ethylene biosynthesis which block the conversion of ACC into ethylene, or inhibitors of ethylene action. Damage to the host plant was less when the mixts. were applied than with strobilurines alone. A specific use is the control of Phakopsora pachyrhizae and Phakopsora meibomiae in soybean.

SUPPL. TERM: strobilurine fungicide ethylene modulator safener
INDEX TERM: Phakopsora meibomiae
Phakopsora pachyrhizae
(control in soybean; strobilurine fungicides with ethylene modulators)
INDEX TERM: Fabaceae
Glycine max
(rust control in; strobilurine fungicides with ethylene modulators)
INDEX TERM: Fungicides
(strobilurine fungicides with ethylene modulators)
INDEX TERM: 61-82-5D, 3-Amino-1,2,4-triazole, mixts. with strobilurines
62-57-7D, α -Aminobutyric acid, mixts. with strobilurines 69-72-7D, Salicylic acid, mixts. with strobilurines 71-44-3D, Spermine, mixts. with strobilurines 110-60-1D, Putrescine, mixts. with strobilurines 121-46-0D, 2,5-Norbornadiene, mixts. with strobilurines 121-79-9D, Propyl gallate, mixts. with strobilurines 124-20-9D, Spermidine, mixts. with strobilurines 645-88-5D, Aminoxyacetic acid, mixts. with strobilurines 3100-04-7D, 1-Methylcyclopropene, mixts. with strobilurines 14701-21-4D, Silver ion, mixts. with strobilurines, biological studies 14701-22-5D, Nickel(II) ion, mixts. with strobilurines, biological studies 22541-53-3D, Cobalt(II) ion, mixts. with strobilurines, biological studies 49669-74-1D, Aminoethoxyvinylglycine, mixts. with strobilurines 76738-62-0D, Pacllobutrazol, mixts. with strobilurines 83657-22-1D, Uniconazole, mixts. with strobilurines 95266-40-3D, Trinexpac-ethyl, mixts. with strobilurines 110374-54-4D, mixts. with strobilurines 117428-22-5D, Picoxystrobin, mixts. with ethylene modulators 126572-77-8D, Strobilurine, mixts. with ethylene modulators 127277-53-6D, Prohexadione-Calcium, mixts. with strobilurines 131860-33-8D, Azoxystrobin, mixts. with ethylene modulators 133408-50-1D, Metominostrobin, mixts. with ethylene modulators 135158-54-2D, Acibenzolar-S-methyl, mixts. with strobilurines 141517-21-7D, Trifloxystrobin, mixts. with ethylene modulators 143390-89-0D, Kresoxim-methyl, mixts. with

ethylene modulators 149961-52-4D, Dimoxystrobin, mixts.
 with ethylene modulators 175013-18-0D, Pyraclostrobin,
 mixts. with ethylene modulators 248593-16-0D,
 Orysastrobin, mixts. with ethylene modulators
 361377-29-9D, Fluoxastrobin, mixts. with ethylene modulators
 851450-32-3 851450-33-4, Cabrio-salicylic acid mixture
 851596-29-7, Cabrio-cobalt chloride mixture 851596-30-0,
 Headline-Keylate Cobalt mixture
 ROLE: AGR (Agricultural use); BIOL (Biological study); USES
 (Uses)
 (strobilurine fungicides with ethylene modulators)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2008:734960; 2006:632743

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD.

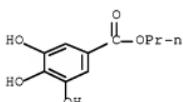
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 (2) Anon; US 5869424 A ZCPLUS
 (3) Anon; US 6369090 B1 ZCPLUS
 (4) Anon; WO 9600005 A1 ZCPLUS
 (5) Anon; WO 9740688 A1 ZCPLUS
 (6) Anon; WO 9948370 A1 ZCPLUS

IT 121-79-9D, Propyl gallate, mixts. with strobilurines

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (strobilurine fungicides with ethylene modulators)

RN 121-79-9 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy-, propyl ester (CA INDEX NAME)



L92 ANSWER 3 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:817606 ZCPLUS Full-text
 DOCUMENT NUMBER: 141:273021
 ENTRY DATE: Entered STN: 07 Oct 2004
 TITLE: Use of aromatic hydroxy compounds as herbicide
 safeners
 INVENTOR(S): Bickers, Udo; Willms, Lothar; Hacker, Erwin; Rosinger, Christopher
 PATENT ASSIGNEE(S): Bayer Cropscience G.m.b.H., Germany
 SOURCE: PCT Int. Appl., 127 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 INT. PATENT CLASSIF.:
 MAIN: A01N025-32
 SECONDARY: A01N037-40; A01N037-44; C07C229-60; C07C229-64;
 C07C235-46; C07C237-36; C07C237-44; C07C243-38;
 C07C255-53; C07C255-54; C07C255-55; C07C255-58;

C07C255-59; C07C065-03

CLASSIFICATION: 5-3 (Agrochemical Bioregulators)
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004084631	A1	20041007	WO 2004-EP2797	20040318
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CA 2520228	A1	20041007	CA 2004-2520228	20040318
EP 1610611	A1	20060104	EP 2004-721478	20040318
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CN 1764374	A	20060426	CN 2004-80007969	20040318
JP 2006521311	T	20060921	JP 2006-504717	20040318
US 20040224844	A1	20041111	US 2004-810211	20040326
ZA 2005006557	A	20070131	ZA 2005-6657	20050819
KR 20060102857	A	20060109	KR 2005-717888	20050923
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PRIORITY APPLN. INFO.:			DE 2003-10313480	A 20030326
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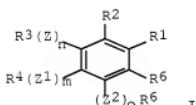
PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004084631	ICM	A01N025-32
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AU 2004224813	IPCI	A01N0025-32 [ICM, 7]; A01N0037-44 [ICS, 7]; C07C0255-55 [ICS, 7]; C07C0237-36 [ICS, 7]; C07C0255-58 [ICS, 7]; A01N0037-40 [ICS, 7]; A01N0037-36 [ICS, 7, C*]; C07C0255-54 [ICS, 7]; C07C0229-60 [ICS, 7]; C07C0237-44 [ICS, 7]; C07C0237-00 [ICS, 7, C*]; C07C0065-03 [ICS, 7]; C07C0065-00 [ICS, 7, C*]; C07C0229-64 [ICS, 7]; C07C0229-00 [ICS, 7, C*]; C07C0255-53 [ICS, 7]; C07C0243-38 [ICS, 7]; C07C0243-00 [ICS, 7, C*]; C07C0255-59 [ICS, 7]; C07C0255-00 [ICS, 7, C*]; C07C0235-46 [ICS, 7]; C07C0235-00 [ICS, 7, C*]
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			C07C065/03; C07C065/21; C07C069/017; C07C069/88; C07C069/90; C07C069/92
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JP 2006521311	IPCI	A01N0025-00 [I,A]; A01N0043-80 [I,A]; A01N0043-72 [I,C*]; A01N0047-36 [I,A]; A01N0047-28 [I,C*]; A01P0013-02 [I,A]	
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	ECLA	A01N025/32; A01N037/40; A01N037/40+M; A01N037/44; C07C065/03; C07C065/21; C07C069/017; C07C069/88; C07C069/90; C07C069/92	
	FTERM	4H011/AB01; 4H011/BA03; 4H011/BB10; 4H011/BB14; 4H011/BC06; 4H011/DA15; 4H011/DD03; 4H011/DD04	
US 20040224844	IPCI	A01N0043-66 [ICM,7]; A01N0043-64 [ICM,7,C*]; A01N0025-32 [ICs,7]	
	IPCR	A01N0025-32 [I,C*]; A01N0025-32 [I,A]; A01N0037-36 [I,C*]; A01N0037-40 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; C07C0065-00 [I,C*]; C07C0065-03 [I,A]; C07C0065-21 [I,A]; C07C0069-00 [I,C*]; C07C0069-017 [I,A]; C07C0069-88 [I,A]; C07C0069-90 [I,A]; C07C0069-92 [I,A]	
	NCL	504/111.000	
	ECLA	A01N0025/32; A01N037/40; A01N037/40+M; A01N037/44; C07C065/03; C07C065/21; C07C069/017; C07C069/88; C07C069/90; C07C069/92	
ZA 2005006657	IPCI	A01N [I,S]; C07C [I,S]	
	IPCR	A01N [I,S]; A01N0025-32 [I,C*]; A01N0025-32 [I,A]; A01N0037-36 [I,C*]; A01N0037-40 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; C07C [I,S]; C07C0065-00 [I,C*]; C07C0065-03 [I,A]; C07C0065-21 [I,A]; C07C0069-00 [I,C*]; C07C0069-017 [I,A]; C07C0069-88 [I,A]; C07C0069-90 [I,A]; C07C0069-92 [I,A]	
	ECLA	C07C235/46; A01N025/32; A01N037/40; A01N037/40+M; A01N037/44; C07C065/03; C07C065/21; C07C069/017; C07C069/88; C07C069/90; C07C069/92; C07C243/38;	

KR 2006002857 IPCI C07C255/53; C07C255/55
A01N0025-32 [I,A]; A01N0037-40 [I,A]; A01N0037-36
[I,C*]; A01N0037-44 [I,A]
ECLA A01N025/32; A01N037/40; A01N037/40+M; A01N037/44;
C07C065/03; C07C065/21; C07C069/017; C07C069/88;
C07C069/90; C07C069/92
IN 2005CN02374 IPCI A01N0025-32 [ICM,7]
OTHER SOURCE(S): MARPAT 141:273021
GRAPHIC IMAGE.



ABSTRACT:

The aromatic hydroxy compds. I [R₁ = carboxy or a carboxy derivative such as CN; R₂ R₆]

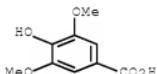
= H, halo, SCN, CN or a (un)substituted hydrocarbyl; R3 = H, halo SCN, Al or B1 if n = 0, and Al, B1 or C1 if n = 1; R4 = H, halo, SCN or CN if m = 0, and A2, B2 or C2 if m = 1; R5 = H, A3 or B3 if o = 0, and A3, B3 or C3 if m = 1; A1, A2, A3 = (un)substituted hydrocarbyl; B1, B2, B3 = acyl; C1, C2, C3 = (un)substituted heterocyclyl; Z, Z1, Z2 = O, SOx or NR7; R7 = (un)substituted hydrocarbyl, acyl, acyloxy, etc.; x = 1 or 2; m,n,o = 0 or 1] or their salts are herbicide safeners.

SUPPL. TERM: arom hydroxy compd herbicide safener
INDEX TERM: Herbicide antidotes
 (aromatic hydroxy compds.)
INDEX TERM: 141112-29-0, Isoxaflutole 173159-57-4, Foramsulfuron
 ROLE: AGR (Agricultural use); BIOL (Biological study); USES
 (Uses)
 (aromatic hydroxy compds. as safeners for)
INDEX TERM: 530-57-4, 3,5-Dimethoxy-4-hydroxybenzoic acid
 1132-21-4, 3,5-Dimethoxybenzoic acid
 ROLE: AGR (Agricultural use); BIOL (Biological study); USES
 (Uses)
 (herbicide safener)
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS
 RECORD.
REFERENCE(S):
 (1) Ambrorab, B; PLANT PHYSIOLOGY AND BIOCHEMISTRY 2002,
 V40(12), P1051 ZCPLUS
 (2) Banas, A; SWEDISH JOURNAL OF AGRICULTURAL RESARCH
 V23(2), P67 ZCPLUS
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 (7) Kosinkiewicz, B; ACTA MICROBIOL POL 1981, V33(2), P103
 (8) Mersie, W; ENVIRONMENTAL AND EXPERIMENTAL BOTANY 1990,
 V30(4), P443 ZCPLUS
 (9) Plant Biolog Defence System La; EP 0908097 A 1999

ZCPLUS

(10) Ray, S; JOURNAL OF EXPERIMENTAL BOTANY 1980, V31(125), P1651 ZCPLUS
 (11) Thomas, V; US 4321084 A 1982 ZCPLUS
 (12) van Bartholomeus, T; US 4263322 A 1981 ZCPLUS
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 (14) Xinhua Industry And Trade; CN 1090756 A 1994 ZCPLUS
 (15) Zingel, V; EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY 1990, V25(8), P673 ZCPLUS

IT 530-57-4, 3,5-Dimethoxy-4-hydroxybenzoic acid
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (herbicide safener)
 RN 530-57-4 ZCPLUS
 CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 4 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:20880 ZCPLUS Full-text
 DOCUMENT NUMBER: 140:72561
 ENTRY DATE: Entered STN: 11 Jan 2004
 TITLE: High throughput screening of plant growth regulators using phytomixotrophic cells
 INVENTOR(S): Kwak, Sang-soo; Lee, Haeng-soon; Kwon, Suk-yoon; Kim, Chang-jin; Lee, Hyang-burn; Lee, Sang-han
 PATENT ASSIGNEE(S): Korea Research Institute of Bioscience and Biotechnology, S. Korea
 SOURCE: PCT Int. Appl., 46 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 INT. PATENT CLASSIF.:
 MAIN: C12Q001-02
 CLASSIFICATION: 5-3 (Agrochemical Bioregulators)
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003225	A1	20040108	WO 2003-KR1041	20030528 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KE, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

KR 2004001352	A	20040107	KR 2002-36512	20020627 <--
AU 2003228117	A1	20040119	AU 2003-228117	20030528 <--
JP 2005530513	T	20050103	JP 2004-517364	20030528 <--
US 20050176584	A1	20050811	US 2005-519511	20050216 <--
PRIORITY APPLN. INFO.:			KR 2002-36512	A 20020627 <--
			WO 2003-KR1041	W 20030528

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
WO 2004003225	ICM	C12Q001-02		
	IPCI	C12Q0001-02 [ICM, 7]		
	IPCR	C12Q0001-02 [I, C*]; C12Q0001-02 [I, A]; G01N0033-50 [I, C*]; G01N0033-50 [I, A]		
	ECLA	G01N033/50F; S01N; S01N		
KR 2004001352	IPCI	C12Q0001-02 [ICM, 7]		
	ECLA	G01N033/50F; S01N; S01N		
AU 2003228117	IPCI	C12Q0001-02 [ICM, 7]		
	IPCR	C12Q0001-02 [I, C*]; C12Q0001-02 [I, A]; G01N0033-50 [I, C*]; G01N0033-50 [I, A]		
	ECLA	G01N033/50F; S01N; S01N		
JP 2005530513	IPCI	C12Q0001-02 [ICM, 7]		
	IPCR	G01N0033-50 [I, A]; G01N0033-50 [I, C*]		
	ECLA	G01N033/50F; S01N; S01N		
	FTERM	4B063/QA06; 4B063/QA18; 4B063/QQ09; 4B063/QQ61; 4B063/QR41; 4B063/QR78; 4B063/QX01		
US 20050176584	IPCI	A01N0025-00 [ICM, 7]; C12Q0001-00 [ICS, 7]		
	IPCR	C12Q0001-02 [I, C*]; C12Q0001-02 [I, A]; G01N0033-50 [I, C*]; G01N0033-50 [I, A]		
	NCL	504/116.100; 435/004.000		
	ECLA	G01N033/50F; S01N; S01N		

ABSTRACT:

The present invention relates to a method for high throughput screening of plant growth regulator, more particularly to the method comprising: culturing phytomixotrophic cells in a microwell plate in which candidates of plant growth regulator were added, treating 2,3,5-triphenyltetrazolium chloride thereto, reacting thereof by adding ethanol after removing solns. from microwells, transferring the reacting solution into the new microwell plate, and measuring optical d. with a high throughput screening reader. Since the method of the present invention can rapidly and conveniently screen many samples and can also evaluate in vivo activities of plant growth regulators, it can effectively be used as a screening method for plant growth inhibitors and activators.

SUPPL. TERM: plant growth regulator screening phytomixotrophic cell
Marchantia Nicotiana

INDEX TERM: Actinomycetes
(culture solution; high-throughput screening of plant growth regulators using phytomixotrophic cells)

INDEX TERM: Catalpa bignonioides
Staphylea bumalda
Viburnum dilatatum
Viburnum erosum
(fruit extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)

INDEX TERM: Ribes fasciculatum chinense
(fruit, and trunk extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)

INDEX TERM: Densitometry (optical)

INDEX TERM: Drug screening
 INDEX TERM: Herbicides
 (high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Hormones, plant
 ROLE: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
 (high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Marchantia polymorpha
 INDEX TERM: Nicotiana tabacum
 (high-throughput screening of plant growth regulators using phytomixotrophic cells of)
 INDEX TERM: Elaeocarpus sylvestris ellipticus
 (leaf extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Cayratia japonica
 Cocculus trilobus
 (leaf, and fruit extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Ligustrum japonicum
 (leaf, and small branch extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Celtis choseniana
 Clerodendrum trichotomum
 (leaf, and trunk extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Castanopsis cuspidata sieboldii
 Ilex integra
 Litsea japonica
 Quercus ilex
 (leaf, trunk heartwood, and trunk bark extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Aralia continentalis
 (leaf, trunk, and fruit extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Carpesium abrotanoides
 Valeriana officinalis latifolia
 (leaf, trunk, and root extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Daphniphyllum macropodium
 (leaf, trunk, fruit, and small branch extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Plant cell
 (phytomixotrophic; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Wasabia koreana
 (root extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)
 INDEX TERM: Trichosanthes kirilowii japonica
 (seed extract; high-throughput screening of plant growth regulators using phytomixotrophic

cells)

INDEX TERM: *Cinnamomum camphora*
 (trunk heartwood, and trunk bark extract; high-throughput screening of plant growth regulators using phytomixotrophic cells)

INDEX TERM: 65-85-0, Benzoic acid, biological studies 66-76-2, Dicumarol 91-64-5, Coumarin 93-35-6, Umbelliferon 121-34-6, Vanillic acid 123-31-9, Hydroquinone, biological studies 149-91-7, Gallic acid, biological studies 330-55-2, Linuron 331-39-5, Caffeic acid 490-79-9, Gentisic acid 530-57-4, Syringic acid 583-17-5, o-Coumaric acid 709-98-8, Propanil 1135-24-6, Ferulic acid 1912-24-9, Atrazine 3943-89-3, Protocatechuic acid, ethyl ester 7169-34-8, 3-Coumaranone 7400-08-0, (p-Coumaric acid 19666-30-9, Oxadiazon 32861-85-1, Chlormethoxynil 52570-16-8, Naproanilide 71283-80-2 81334-34-1, Imazapyr 83164-33-4, Diflufenican 93697-74-6, Pyrazosulfuron ethyl 97886-45-8, Dithiopyr 168088-61-7, Pyribenzoxin 412928-75-7, LGC-42153
 ROLE: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
 (high-throughput screening of plant growth regulators using phytomixotrophic cells)

INDEX TERM: 298-96-4, 2,3,5-Triphenyltetrazolium chloride
 ROLE: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (high-throughput screening of plant growth regulators using phytomixotrophic cells treated with)

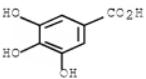
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S): (1) Dalton, C; Biochem Soc Trans 1980, V8(4), P475 ZCPLUS
 (2) Otero, A; Cytotechnology 1991, V6(2), P137 MEDLINE
 (3) Rich, P; FEMS Microbiol Lett 2001, V202(2), P181 ZCPLUS
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IT 149-91-7, Gallic acid, biological studies 530-57-4,
 Syringic acid
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
 (high-throughput screening of plant growth regulators using phytomixotrophic cells)

RN 149-91-7 ZCPLUS

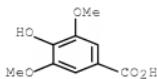
CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



Oc1cc(C(=O)O)cc(O)c1

RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 5 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:814935 ZCPLUS Full-text
 DOCUMENT NUMBER: 140:72529
 ENTRY DATE: Entered STN: 17 Oct 2003
 TITLE: Phenolic compounds from olive oil mill wastewater
 against the "tricky germination" of two worst weeds
 AUTHOR(S): Aliotta, Giovanni; Cafiero, Gennaro; Fiorentino,
 Antonio
 CORPORATE SOURCE: Dipartimento di Scienze della Vita, Seconda Universita
 degli Studi di Napoli, Caserta, 43-81100, Italy
 SOURCE: Allelopathy (2002), 129-138. Editor(s): Reigosa,
 Manuel J.; Pedrol, Nuria. Science Publishers, Inc.:
 Enfield, N. H.
 CODEN: 69EQQJ; ISBN: 1-57808-254-4
 DOCUMENT TYPE: Conference
 LANGUAGE: English
 CLASSIFICATION: 5-3 (Agrochemical Bioregulators)
ABSTRACT:
 The polluting reverse osmosis fraction of olive oil wastewater was examined for its herbicidal activity against seed germination of two major weeds: redroot pigweed (*Amaranthus retroflexus* L.) and lambsquarter (*Chenopodium album* L.) after the release of the seed dormancy. The reverse osmosis fraction strongly inhibited seed germination of both weeds, while a synthetic fraction prepared from thirteen pure polyphenols isolated from the original active fraction, resulted less active on weed germination. Thus, phytotoxicity could be due to a synergic action of polyphenols with other unidentified substances present in the wastewater. Microscopic observations showed the seed structure of the two weeds and their germination responses in presence and absence of reverse osmosis fraction.

SUPPL. TERM: phenol olive oil mill wastewater herbicide pigweed
 lambsquarter germination; *Amaranthus* *Chenopodium* germination
 phenol olive oil mill wastewater herbicide
 INDEX TERM: Olive oil
 ROLE: MSC (Miscellaneous)
 (mill wastewater; phenolic compds. from olive oil mill
 wastewater effect on germination of redroot pigweed and
 lambsquarter)

INDEX TERM: Wastewater
 (olive oil mill; phenolic compds. from olive oil mill
 wastewater effect on germination of redroot pigweed and
 lambsquarter)

INDEX TERM: *Amaranthus retroflexus*
Chenopodium album
 Germination
 Herbicides
 Weed control
 (phenolic compds. from olive oil mill wastewater effect
 on germination of redroot pigweed and lambsquarter)

INDEX TERM: Allelochemicals
 ROLE: AGR (Agricultural use); BSU (Biological study),

INDEX TERM: unclassified); BIOL (Biological study); USES (Uses) (phenolic compds. from olive oil mill wastewater effect on germination of redroot pigweed and lambsquarter)

INDEX TERM: Phenols, biological studies

ROLE: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses) (polyphenols, nonpolymeric; phenolic compds. from olive oil mill wastewater effect on germination of redroot pigweed and lambsquarter)

INDEX TERM: 99-50-3, Protocatechuic acid 99-96-7, 4-Hydroxybenzoic acid, biological studies 102-32-9, 3,4-Dihydroxyphenylacetic acid 120-80-9, Catechol, biological studies 121-34-6, Vanillic acid 156-38-7, 4-Hydroxyphenylacetic acid 331-39-5, Caffeic acid 501-94-0, Tyrosol 530-57-4, 4-Hydroxy-3,5-dimethoxybenzoic acid 530-59-6, Sinapic acid 1135-24-6, Ferulic acid 7400-08-0, p-Coumaric acid 10597-60-1, 3-Hydroxytyrosol

ROLE: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses) (phenolic compds. from olive oil mill wastewater effect on germination of redroot pigweed and lambsquarter)

OS.CITING.REF.COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2005:526740

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):

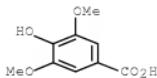
- (1) Aliotta, G; Allelopathy J 1996, V3, P207
- (2) Aliotta, G; Allelopathy J (in press) 2001
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- (19) Zohary, D; Science 1975, V187, P319

IT 530-57-4, 4-Hydroxy-3,5-dimethoxybenzoic acid

RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses) (phenolic compds. from olive oil mill wastewater effect on germination of redroot pigweed and lambsquarter)

RN 530-57-4 ZCAPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 6 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 20031271589 ZCPLUS Full-text
 DOCUMENT NUMBER: 138:288664
 ENTRY DATE: Entered STN: 09 Apr 2003
 TITLE: Water-soluble films for packaging of chlorine compounds
 INVENTOR(S): Higasa, Shintaro; Fujiwara, Naoki; Isosaki, Takanori
 PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 INT. PATENT CLASSIF.:
 MAIN: B65D065-46
 SECONDARY: C08F008-12; C08F216-06; C08J005-18; C08K005-09;
 C08K005-13; C08L029-04; C08F226-00; C08L001-00
 CLASSIFICATION: 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 5, 61
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003104435	A	20030409	JP 2001-302359	20010928 <-- PRIORITY APPLN. INFO.: JP 2001-302359 20010928 <--
PATENT CLASSIFICATION CODES:				
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES				

JP 2003104435	ICM	B65D065-46		
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IPCI B65D0065-46 [ICM,7]; C08F0008-12 [ICS,7]; C08F0008-00 [ICS,7,C*]; C08F0216-06 [ICS,7]; C08F0216-00 [ICS,7,C*]; C08J0005-18 [ICS,7]; C08K0005-09 [ICS,7]; C08K0005-13 [ICS,7]; C08K0005-00 [ICS,7,C*]; C08L0029-04 [ICS,7]; C08L0029-00 [ICS,7,C*]; C08F0226-00 [ICS,7]; C08L0001-00 [ICS,7]				
IPCR B65D0065-46 [I,C*]; B65D0065-46 [I,A]; C08F0008-00 [I,C*]; C08F0008-12 [I,A]; C08F0216-00 [I,C*]; C08F0216-06 [I,A]; C08J0005-18 [I,C*]; C08J0005-18 [I,A]; C08K0005-00 [I,C*]; C08K0005-09 [I,A]; C08K0005-13 [I,A]; C08L0029-00 [I,C*]; C08L0029-04 [I,A]; C08L0101-00 [I,C*]; C08L0101-16 [I,A]				

ABSTRACT:

The films for packaging of Cl compds. such as pesticides and antimicrobial agents, comprise modified vinyl alc. polymers having 1-10 mol% N-vinylamide monomer units and optionally contain carbohydrates, gallic acid or its Cl-5 alkyl esters, and reducing hydroxycarboxylic acids or their salts. Thus, a film comprising saponified vinyl acetate-N-vinylcaprolactam copolymer (N-vinylcaprolactam unit content 6.0 mol%) 100, glycerin 15, etherified starch 10, Pr gallate 1.0, citric acid 0.8, and talc 5 parts showed Young's modulus

2.2 kg/mm², tensile strength 2.0 kg/cm², and good chemical resistance (against trichloroisocyanuric acid) and dissolved in H₂O at 20° within 14 s.

SUPPL. TERM: water soluble film modified polyvinyl alc; saponid vinyl acetate vinylcaprolactam copolymer film; chlorine pesticide packaging water soluble film; chem resistance water soluble packaging film; chloroisocyanurate antimicrobial packaging film polyvinyl alc; carbohydrate vinyl alc polymer packaging film; gallate vinyl alc polymer packaging film; hydroxycarboxylate vinyl alc polymer packaging film

INDEX TERM: Carbohydrates, uses
 ROLE: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (additive for improved water solubility; chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for packaging of Cl compds.)

INDEX TERM: Chemically resistant materials
 Plastic films
 (chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for packaging of Cl compds.)

INDEX TERM: Water purification
 (chlorination; chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for packaging of Cl compds.)

INDEX TERM: Swimming pools
 (chlorine-containing antimicrobial agents; chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for packaging of Cl compds.)

INDEX TERM: Antibacterial agents
 Antimicrobial agents
 Pesticides
 (chlorine-containing; chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for packaging of Cl compds.)

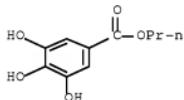
INDEX TERM: Packaging materials
 (films; chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for packaging of Cl compds.)

INDEX TERM: Carboxylic acids, uses
 ROLE: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (hydroxy, additive for improved water solubility; chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for packaging of Cl compds.)

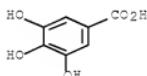
INDEX TERM: Water purification
 (sterilization and disinfection; chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for packaging of Cl compds.)

INDEX TERM: 50-81-7, L-Ascorbic acid, uses 77-92-9, Citric acid, uses 87-69-4, Tartaric acid, uses 99-20-7, Trehalose 121-79-9, Propyl gallate 149-91-7, Gallic acid, uses 831-61-8, Ethyl gallate 6915-15-7, Malic acid 9005-25-8, Corn starch, uses 9005-25-8D, Starch, ether or oxidized 66230-82-8, MS 3800
 ROLE: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (additive for improved water solubility; chemical resistant water-soluble vinyl alc.-vinylamide copolymer films for

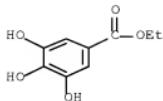
INDEX TERM: packaging of Cl compds.)
 87-90-1, Trichloroisocyanuric acid
 ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (antimicrobial agent; chemical resistant water-soluble vinyl
 alc.-vinylamide copolymer films for packaging of Cl
 compds.)
 INDEX TERM: 25086-89-9DP, Vinyl acetate-N-vinyl-2-pyrrolidone copolymer,
 saponified 27399-70-8DP, Vinyl acetate-N-vinylcaprolactam
 copolymer, saponified 28928-24-7DP, saponified 80512-26-1DP,
 N-Vinylacetamide-vinyl acetate copolymer, saponified
 108941-57-7DP, Vinyl acetate-N-vinylformamide copolymer,
 saponified
 ROLE: IMF (Industrial manufacture); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (chemical resistant water-soluble vinyl alc.-vinylamide
 copolymer films for packaging of Cl compds.)
 IT 121-79-9, Propyl gallate 149-91-7, Gallic acid, uses
 831-61-8, Ethyl gallate
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (additive for improved water solubility; chemical resistant water-soluble
 vinyl
 alc.-vinylamide copolymer films for packaging of Cl compds.)
 RN 121-79-9 ZCAPLUS
 CN Benzoic acid, 3,4,5-trihydroxy-, propyl ester (CA INDEX NAME)



RN 149-91-7 ZCAPLUS
 CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



RN 831-61-8 ZCAPLUS
 CN Benzoic acid, 3,4,5-trihydroxy-, ethyl ester (CA INDEX NAME)



L92 ANSWER 7 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:254147 ZCPLUS Full-text
 DOCUMENT NUMBER: 138:267220
 ENTRY DATE: Entered STN: 02 Apr 2003
 TITLE: Shelf-stable, virulent preparation containing
 Agrobacterium cells, an acidulant and a phenolic
 compound
 INVENTOR(S): Sinnott, Robert A.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S., 5 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 INT. PATENT CLASSIF.:
 MAIN: A01N025-00
 SECONDARY: A01N063-00; C12N001-00; C12N001-12; C12N001-20
 US PATENT CLASSIF.: 424093400; 424405000; 435252100; 435822000
 CLASSIFICATION: 5-6 (Agrochemical Bioregulators)
 Section cross-reference(s): 10
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6540997	B1	20030401	US 2000-491158	20000126 <--
PRIORITY APPLN. INFO.:			US 1999-117460P	P 19990126 <--
PATENT CLASSIFICATION CODES:				
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
US 6540997	ICM	A01N025-00		
	ICS	A01N063-00; C12N001-00; C12N001-12; C12N001-20		
	INCL	424093400; 424405000; 435252100; 435822000		
	IPCI	A01N0025-00 [ICM,7]; A01N0063-00 [ICS,7]; C12N0001-00 [ICS,7]; C12N0001-12 [ICS,7]; C12N0001-20 [ICS,7]		
	IPCR	A01N0063-00 [I,C*]; A01N0063-00 [I,A]		
	NCL	424/093.400; 424/405.000; 435/252.100; 435/822.000		
	ECLA	A01N063/00+M		

ABSTRACT:

A virulent preparation of Agrobacterium cells, includes Agrobacterium cells, an acidulant, and a phenolic compound that is preferably Et vanillin. The preparation is shelf stable at ambient temperature for several months. The preparation may further contain a dry excipient material, a food coloring agent, a flow agent, a plant hormone, a bacterial growth promoter and an antifungal agent.

SUPPL. TERM: Agrobacterium acidulant phenolic formulation stability
 INDEX TERM: Food

(dyes; in shelf-stable, virulent preparation containing Agrobacterium cells, acidulant and phenolic compound)

INDEX TERM: Dyes
(food; in shelf-stable, virulent preparation containing Agrobacterium cells, acidulant and phenolic compound)

INDEX TERM: Fungicides

Solvents
(in shelf-stable, virulent preparation containing Agrobacterium cells, acidulant and phenolic compound)

INDEX TERM: Hormones, microbial
ROLE: AGR (Agricultural use); ARG (Analytical reagent use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(in shelf-stable, virulent preparation containing Agrobacterium cells, acidulant and phenolic compound)

INDEX TERM: Hormones, plant
ROLE: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(in shelf-stable, virulent preparation containing Agrobacterium cells, acidulant and phenolic compound)

INDEX TERM: Agrobacterium
Agrochemical formulations

Stability
(shelf-stable, virulent preparation containing Agrobacterium cells, acidulant and phenolic compound)

INDEX TERM: Flavonoids

Lignans

Phenols, biological studies
ROLE: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(shelf-stable, virulent preparation containing Agrobacterium cells, acidulant and phenolic compound)

INDEX TERM: 99-96-7, p-Hydroxybenzoic acid, biological studies
121-32-4, Ethyl vanillin 121-33-5, Vanillin 134-96-3, Syringaldehyde 458-35-5, Coniferyl alcohol 530-57-4, Syringic acid 530-59-6, Sinapic acid 537-33-7, Sinapyl alcohol 1080-12-2, Vanillalacetone 1135-24-6, Ferulic acid 2041-35-2, 5-Hydroxyferulic acid methyl ester 2309-07-1, Ferulic acid methyl ester 2478-38-8, Acetosyringone 7558-80-7, Sodium dihydrogen phosphate 9005-53-2, Lignin, biological studies 20733-94-2, Sinapic acid methyl ester
ROLE: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(shelf-stable, virulent preparation containing Agrobacterium cells, acidulant and phenolic compound)

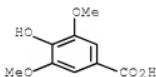
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):
(1) Chapple; US 5981837 A 1999 ZCPLUS
(2) Emerson; US 6251951 B1 2001 ZCPLUS
(3) Michelsen; US 6143543 A 2000 ZCPLUS

IT 530-57-4, Syringic acid

10/810211

RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL
(Biological study); USES (Uses)
(shelf-stable, virulent preparation containing Agrobacterium cells,
acidulant and phenolic compound)
RN 530-57-4 ZCPLUS
CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 8 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:174533 ZCPLUS Full-text
DOCUMENT NUMBER: 138:182064
ENTRY DATE: Entered STN: 07 Mar 2003
TITLE: Transformation of soybeans by pretreatment with cytokinin and regeneration of embryonic explants of soybean seed on porous substrates in presence of vir-inducing phenol compound
INVENTOR(S): Dias, Kalyani Mallika
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
DOCUMENT TYPE: CODEN: USXXCO
Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C12N015-82
SECONDARY: C12N015-87; A01H005-00; C12N015-84
US PATENT CLASSIF.: 800294000; 800312000; 800292000; 800293000; 435469000;
435470000
CLASSIFICATION: 3-2 (Biochemical Genetics)
Section cross-reference(s): 11
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030046733	A1	20030306	US 2001-948292	20010906 <--
PRIORITY APPLN. INFO.:			US 2001-948292	20010906 <--
PATENT CLASSIFICATION CODES:				
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
US 20030046733	ICM	C12N015-82		
	ICS	C12N015-87; A01H005-00; C12N015-84		
	INCL	800294000; 800312000; 800292000; 800293000; 435469000; 435470000		
	IPCI	C12N0015-82 [ICM,7]; C12N0015-87 [ICS,7]; A01H0005-00 [ICS,7]; C12N0015-84 [ICS,7]		
	IPCR	C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]		
	NCL	800/294.000; 435/469.000; 435/470.000; 800/292.000; 800/293.000; 800/312.000		
	ECLA	C12N015/82A4B		

ABSTRACT:

Soybean are transformed by inserting a functional gene into an explant of a soybean (particularly after being pre-treated with high doses of cytokinin (6-BAP)), transferring embryonic axes explants of the mature soybean seeds incubated on wet filter papers in the presence of at least one phenol compound naturally produced when plant cells have been wounded, to induce vir genes, and incubated in the dark in such presence at 20-25° for >24 h. After incubation, the explants are transferred to a media to develop shoots from explants, control Agrobacterium growth, and after shoot elongation, separated shoots, with or without roots, are either transferred to soil, or contacted with at least 1 mg/L IBA before transplant.

SUPPL. TERM: soybean transformation regeneration cytokinin culture
INDEX TERM:
 Antibiotics
 Herbicides
 (selection agent; transformation of soybeans by pretreatment with cytokinin and regeneration of embryonic explants of soybean seed on porous substrates in presence of vir-inducing phenol compound)
INDEX TERM:
 Agrobacterium
 Electroporation
 Glycine max
 Microprojectile bombardment
 Plant tissue culture
 Regeneration, plant
 Transformation, genetic
 (transformation of soybeans by pretreatment with cytokinin and regeneration of embryonic explants of soybean seed on porous substrates in presence of vir-inducing phenol compound)
INDEX TERM:
 Chimeric gene
 Cytokinins
 Hormones, plant
 Phenols, biological studies
 ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (transformation of soybeans by pretreatment with cytokinin and regeneration of embryonic explants of soybean seed on porous substrates in presence of vir-inducing phenol compound)
INDEX TERM:
 Gene, microbial
 ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (vir, induction during regeneration; transformation of soybeans by pretreatment with cytokinin and regeneration of embryonic explants of soybean seed on porous substrates in presence of vir-inducing phenol compound)
INDEX TERM:
 1071-83-6, Glyphosate 6379-56-2, Hygromycin 8063-07-8, Kanamycin 35597-43-4, Bialaphos
 ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (selection agent; transformation of soybeans by pretreatment with cytokinin and regeneration of embryonic explants of soybean seed on porous substrates in presence of vir-inducing phenol compound)
INDEX TERM:
 134-96-3, Syringaldehyde 498-02-2, Acetovanillone

530-57-4, Syringic acid 530-59-6, Sinapic acid
 2478-38-8, Acetosyringone 90426-22-5,
 α -Hydroxyacetosyringone

ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(signal compound in porous paper support medium;
 transformation of soybeans by pretreatment with
 cytokinin and regeneration of embryonic explants
 of soybean seed on porous substrates
 in presence of vir-inducing phenol compound)

INDEX TERM: 87-51-4, IAA, biological studies 1214-39-7,

6-Benzylaminopurine

ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(transformation of soybeans by pretreatment
 with cytokinin and regeneration of embryonic
 explants of soybean seed on
 porous substrates in presence of vir-inducing phenol
 compound)

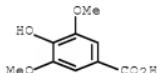
IT 530-57-4, Syringic acid

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(signal compound in porous paper support medium; transformation of
 soybeans by pretreatment with cytokinin and regeneration of
 embryonic explants of soybean seed on
 porous substrates in presence of vir-inducing phenol compound)

RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 9 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:917188 ZCPLUS [Full-text](#)

DOCUMENT NUMBER: 138:91292

ENTRY DATE: Entered STN: 04 Dec 2002

TITLE: Antimicrobial cotton cloth utilizing chemicals of
 plant origin. Antibacterial action of the cotton
 cloth fixed with tannic acid

AUTHOR(S): Fukuda, Fumie; Yamaguchi, Haruhiko; Higuchi, Mitsuo

CORPORATE SOURCE: Lab. Polymer Sci. Forest Resour., Div. Bioprod.
 Biotechnol., Sci., Dep. Forest Forest Prod. Sci., Fac.

Source: Agric., Kyushu Univ., Fukuoka, 812-8581, Japan
 Gakugei Zasshi - Kyushu Daigaku Daigakuin Nogaku
 Kenkyuin (2002), 56(2), 153-161

CODEN: GZKDBV

PUBLISHER: Kyushu Daigaku Daigakuin Nogaku Kenkyuin

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

CLASSIFICATION: 40-9 (Textiles and Fibers)

Section cross-reference(s): 5

ABSTRACT:

In our previous paper, aminoethylated cotton cloth fixed with tannic acid was reported to have a high antibacterial activity against *Escherichia coli* W3110 and *Staphylococcus aureus* IFO13276. In this paper, the results of the expts. carried out to investigate the mechanisms of the antibacterial action of the tannic acid-modified cotton cloth are described. Antibacterial activities of model compds. having different nos. of phenolic hydroxyl group were evaluated against *E. coli* W3110 and *S. aureus* IFO13276. It was found that the value of min. inhibitory concentration (MIC) of the model compound decreased with an increase in the number of phenolic OH in a mol. It was also found that the model compound having a CO2H group had a greater MIC than the corresponding model compound having no CO2H did. Thus, the antibacterial activities of phenolic compds. were ascribed to their phenolic OH. Aminoethylated cotton cloths fixed with model compds. having different nos. of phenolic OH and CO2H showed antibacterial activities. In this case, too, the activity increased with an increase in the number of OH in the model compound fixed. As no distinct halo was observed in the culture-tests of the both bacteria the phenolic compds. were considered to have antibacterial activities in the state of being fixed on the cotton cloth.

SUPPL. TERM: antimicrobial cotton cloth tannic acid action; phenolic hydroxy group antibacterial cotton cloth

INDEX TERM: Antibacterial agents
(antibacterial action of cotton cloth fixed with tannic acid)

INDEX TERM: Tannins
ROLE: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(antibacterial action of cotton cloth fixed with tannic acid)

INDEX TERM: Structure-activity relationship
(bactericidal; antibacterial action of cotton cloth fixed with tannic acid)

INDEX TERM: Textiles
(cotton; antibacterial action of cotton cloth fixed with tannic acid)

INDEX TERM: Phenols, biological studies
ROLE: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(model compds. for tannic acid; antibacterial action of cotton cloth fixed with tannic acid)

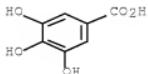
INDEX TERM: Hydroxyl group
(phenolic, antibacterial activity in relation to; antibacterial action of cotton cloth fixed with tannic acid)

INDEX TERM: 87-66-1, 1,2,3-Benzenetriol 89-86-1, β -Resorcylic acid 99-96-7, p-Hydroxybenzoic acid, biological studies 108-46-3, Resorcinol, biological studies 108-95-2, Phenol, biological studies 120-80-9, Catechol, biological studies 149-91-7, Gallic acid, biological studies 331-39-5
ROLE: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(model compound for tannic acid; antibacterial action of cotton cloth fixed with tannic acid)

IT 149-91-7, Gallic acid, biological studies

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(model compound for tannic acid; antibacterial action of cotton cloth fixed with tannic acid)

RN 149-91-7 ZCPLUS
 CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



L92 ANSWER 10 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:914294 ZCPLUS Full-text
 DOCUMENT NUMBER: 138:282742
 ENTRY DATE: Entered STN: 03 Dec 2002
 TITLE: Allelopathic action of exometabolites of *Tagetes* L. species on the growth and development of quack-grass
 AUTHOR(S): Mashkovs'ka, S. P.; Didik, N. P.; Brechko, V. L.
 CORPORATE SOURCE: Nats. Bot. Sad im. M. M. Grishka, NAN Ukr., Kiev, 01014, Ukraine
 SOURCE: *Fiziologiya i Biokhimiya Kul'turnykh Rastenii* (2002), 34(5), 437-442
 CODEN: FBKRAT; ISSN: 0532-9310
 PUBLISHER: Izdatel'stvo "Logos"
 DOCUMENT TYPE: Journal
 LANGUAGE: Ukrainian
 CLASSIFICATION: 5-3 (Agrochemical Bioregulators)
 ABSTRACT:
 The influence of water-soluble, volatile allelochems. of some marigold species (*Tagetes* L.), as well as decay products of their residues on quack-grass (*Elytrigia repens* (L.) Nevskii) was studied. It was found that plant residues, phenolic acids, volatile oils of *Tagetes* species have an inhibitory effect on the growth and development of quack-grass. Exudates of *T. signata* and *T. lucida* were shown to be promising for allelopathic control of *E. repens* in agroecosystems.

SUPPL. TERM: *Tagetes* exometabolite allelopathy *Elytrigia* herbicide
 INDEX TERM: Allelopathy
Elytrigia repens
 Herbicides
Tagetes
Tagetes lucida
Tagetes patula
Tagetes tenuifolia
 (allelopathic action of exometabolites of *Tagetes* species
 on growth and development of quack-grass)
 INDEX TERM: Allelochemicals
 ROLE: AGR (Agricultural use); BSU (Biological study,
 unclassified); BIOL (Biological study); USES (Uses)
 (allelopathic action of exometabolites of *Tagetes* species
 on growth and development of quack-grass)
 INDEX TERM: 99-96-7, biological studies 121-34-6, Vanillic acid
 303-07-1, γ -Resorcylic acid 331-39-5, Caffeic acid
 530-57-4, Syringic acid 1135-24-6, Ferulic acid
 7400-08-0, p-Cumaric acid
 ROLE: AGR (Agricultural use); BSU (Biological
 study, unclassified); OCU (Occurrence, unclassified); BIOL

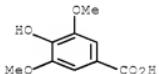
(Biological study); OCCU (Occurrence); USES (Uses)
 (allelopathic action on growth and development of
 quack-grass of exometabolites of Tagetes species, containing)

IT 530-57-4, Syringic acid

RL: AGR (Agricultural use); BSU (Biological study,
 unclassified); OCU (Occurrence, unclassified); BIOL (Biological study);
 OCCU (Occurrence); USES (Uses)
 (allelopathic action on growth and development of quack-grass of
 exometabolites of Tagetes species, containing)

RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 11 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:204969 ZCPLUS Full-text
 DOCUMENT NUMBER: 136:215855
 ENTRY DATE: Entered STN: 19 Mar 2002
 TITLE: Preservatives for and preservation of agricultural
 and horticultural products
 INVENTOR(S): Iijima, Yoshihiko; Fukushima, Kenji; Nakamura, Michie
 PATENT ASSIGNEE(S): Dainichiseika Color and Chemical Mfg. Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 INT. PATENT CLASSIF.:
 MAIN: A01N003-00
 SECONDARY: A01N003-02; A23B007-148; A23L003-3508; A23L003-358
 CLASSIFICATION: 17-6 (Food and Feed Chemistry)
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002080301	A	20020319	JP 2000-239548	20000808 <--
JP 4077145	B2	20080416		
KR 2005081181	A	20050818	KR 2005-54911	20050624 <--
JP 2005304507	A	20051104	JP 2005-196319	20050705 <--
JP 4077470	B2	20080416		
PRIORITY APPLN. INFO.:				
			JP 1999-257261	A 19990910 <--
			JP 1999-257262	A 19990910 <--
			JP 2000-109509	A 20000411 <--
			JP 2000-109510	A 20000411 <--
			JP 2000-109511	A 20000411 <--
			JP 2000-206952	A 20000707 <--
			JP 2000-239548	A3 20000808 <--
			KR 2000-53423	A3 20000908 <--

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 2002080301	ICM	A01N003-00
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	ICS	A01N003-02; A23B007-148; A23L003-3508; A23L003-358
	IPCI	A01N003-00 [I,A]; A01N003-02 [I,A]; A01P003-00 [I,A]; A01N0037-06 [I,A]; A01N0037-10 [I,A]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0037-36 [I,C*]; A01N0057-20 [I,A]; A01N0057-00 [I,C*]; A23B0007-148 [I,A]; A23B0007-144 [I,C*]; A23L0003-3508 [I,A]; A23L0003-3463 [I,C*]; A23L0003-358 [I,A]; A23L0003-3454 [I,C*]
	IPCR	A23L0003-3463 [I,C*]; A23L0003-3508 [I,A]; A01N0003-00 [I,C*]; A01N0003-00 [I,A]; A01N0003-02 [I,A]; A23B0007-144 [I,C*]; A23B0007-148 [I,A]; A23L0003-3454 [I,C*]; A23L0003-358 [I,A]; A01N0037-06 [I,C]; A01N0037-10 [I,C]; A01N0037-36 [I,C]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0057-00 [I,C]; A01N0057-20 [I,A]; A01P0003-00 [I,C]; A01P0003-00 [I,A]
KR 2005081181	IPCI	A23B0007-144 [ICM,7]
	ECLA	A23B007/10; A23B007/144; A23B007/154; A23B007/157; A23B009/18; A23B009/26; A23B009/30
JP 2005304507	IPCI	A01N0003-00 [I,A]; A01N0003-02 [I,A]; A01P0003-00 [I,A]; A01N0037-06 [I,A]; A01N0037-10 [I,A]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0037-36 [I,C*]; A01N0057-20 [I,A]; A01N0057-00 [I,C*]; A23B0007-148 [I,A]; A23B0007-144 [I,C*]; A23L0003-3508 [I,A]; A23L0003-3463 [I,C*]; A23L0003-358 [I,A]; A23L0003-3454 [I,C*]
	IPCR	A01N0003-00 [I,C]; A01N0003-00 [I,A]; A23B0007-144 [I,C*]; A23B0007-148 [I,A]; A01N0003-02 [I,A]; A01N0037-06 [I,C]; A01N0037-06 [I,A]; A01N0037-10 [I,C]; A01N0037-38 [I,A]; A01N0037-10 [I,A]; A01N0037-36 [I,C]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0057-00 [I,C]; A01N0057-20 [I,A]; A01P0003-00 [I,C]; A23L0003-3454 [I,C]; A23L0003-3508 [I,A]; A23L0003-358 [I,A]
	FTERM	4B069/H/01; 4B069/H/11; 4B069/KA03; 4B069/KA07; 4B069/KA10; 4B069/KB04; 4B069/KC13; 4B069/KC24; 4B069/KD02; 4H011/BB06; 4H011/BB09; 4H011/BB18; 4H011/BB19; 4H011/CA04; 4H011/CB10; 4H011/CD03; 4H011/DH02

ABSTRACT:

The preservatives (I) are useful for sustained supply of CO₂ and inhibition of ethylene formation in the atmospheric of the agricultural and horticultural products. I comprises carboxylic acids and bicarbonate salt.

SUPPL. TERM:	bicarbonate carbon dioxide agricultural horticultural product preservation
INDEX TERM:	Polymers, biological studies
	ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
	(acidic group-containing; preservatives for and preservation of agricultural and horticultural products)
INDEX TERM:	Carboxyl group
	(polymers containing; preservatives for and preservation of agricultural and horticultural products)
INDEX TERM:	Controlled atmospheres
	Crop (plant)
	Food preservation
	Food preservatives
	Malus pumila
	Phosphate group

(preservatives for and preservation of agricultural and horticultural products)

INDEX TERM: Bicarbonates

Carboxylic acids, biological studies

ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(preservatives for and preservation of agricultural and horticultural products)

INDEX TERM: Functional groups

(sulfate, polymers containing; preservatives for and preservation of agricultural and horticultural products)

INDEX TERM: Functional groups

(sulfonate group, polymers containing; preservatives for and preservation of agricultural and horticultural products)

INDEX TERM: 56-86-0, Glutamic acid, biological studies 59-67-6, Nicotinic acid, biological studies 65-85-0, Benzoic acid, biological studies 68-04-2, Trisodium citrate 69-72-7, Salicylic acid, biological studies 77-92-9, Citric acid, biological studies 97-65-4, Itaconic acid, biological studies 110-44-1, Sorbic acid 112-38-9, Undecylenic acid 121-34-6, Vanillic acid 124-04-9, Adipic acid, biological studies 124-38-9, Carbon dioxide, biological studies 144-55-8, Sodium bicarbonate, biological studies 331-39-5, Caffeic acid 530-57-4, Syringic acid 621-82-9, Cinnamic acid, biological studies 1135-24-6, Ferulic acid 7400-08-0, p-Cumaric acid 18996-35-5, Monosodium citrate 7400-08-0, p-Cumaric acid 18996-35-5, Monosodium citrate

ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(preservatives for and preservation of agricultural and horticultural products)

INDEX TERM: 74-85-1, Ethylene, biological studies

ROLE: BSU (Biological study, unclassified); BIOL (Biological study)

(preservatives for and preservation of agricultural and horticultural products)

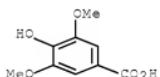
IT 530-57-4, Syringic acid

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(preservatives for and preservation of agricultural and horticultural products)

RN 530-57-4 ZCAPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



and its use in the manipulation of plant secondary metabolism

INVENTOR(S): Chapple, Clinton C. S.
 PATENT ASSIGNEE(S): Purdue Research Foundation, USA
 SOURCE: PCT Int. Appl., 90 pp.
 CODEN: PIXD2

DOCUMENT TYPE: Patent
 LANGUAGE: English

INT. PATENT CLASSIF.:
 MAIN: C12N009-00
 CLASSIFICATION: 7-5 (Enzymes)

FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004614	A2	20020117	WO 2001-US21549	20010709 <--
WO 2002004614	A3	20020808		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KE, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 20020026658	A1	20020228	US 2001-901252	20010709 <--

PRIORITY APPLN. INFO.: US 2000-216593P P 20000707 <--

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002004614	ICM	C12N009-00
	IPCI	C12N009-00 [ICM,7]
	IPCR	C07K0014-415 [I,C*]; C07K0014-415 [I,A]; C12N0009-10 [I,C*]; C12N0009-10 [I,A]; C12N0015-54 [I,C*]; C12N0015-54 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]
	ECLA	C07K014/415; C12N009/10C1A; C12N015/82C4B; C12N015/82C4B12; C12N015/82C8B; C12N015/82C8B6E; K01K; M12N
US 20020026658	IPCI	A01H0005-00 [ICM,7]; C12N0015-82 [ICS,7]; C12N0015-29 [ICS,7]; C12N0015-62 [ICS,7]
	IPCR	C07K0014-415 [I,C*]; C07K0014-415 [I,A]; C12N0009-10 [I,C*]; C12N0009-10 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]
	NCL	800/281.000; 435/069.800; 536/023.600; 800/278.000; 800/302.000
	ECLA	C07K014/415; C12N009/10C1A; C12N015/82C4B; C12N015/82C4B12; C12N015/82C8B6E; K01K; M12N

ABSTRACT:

A gene SNG1 has been isolated from *Arabidopsis* encoding sinapoylglucose-malate sinapoyltransferase (SMT). Isolation, cloning, sequencing and characterization of SNG1 are disclosed. The cDNA sequence and the encoded amino acid sequence of SMT are provided. SMT is responsible for the substitution of a glucose moiety on sinapoylglucose with a malate moiety to form sinapoylmalate in plant vacuoles. The enzyme is useful for the manipulation of plant secondary metabolism

SUPPL. TERM: *Arabidopsis gene SNG1 sinapoylglucose malate sinapoyltransferase cDNA sequence; plant secondary metabolite sinapoyltransferase Arabidopsis*

INDEX TERM: *Solar UV radiation*
 (B, altering plant resistance to; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: *Gene, plant*
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (SNG1; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: *Disease resistance, plant*
 (altering of; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: *Arabidopsis*
Arabidopsis thaliana
DNA sequences
Genetic engineering
Genetic vectors
Molecular cloning
Protein sequences
cDNA sequences
 (cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: *Chimeric gene, plant*
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: *Antisense oligonucleotides*
 ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: *Monosaccharides*
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
 (esters, secondary metabolism of; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: *Plant pathogen*
 (insect, altering plant resistance to; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: Transformation, genetic
 (of plant cells; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: Insecta
 (plant pathogen, altering plant resistance to; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: Transgene
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (plant; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: Fermentation
 (protein; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: Metabolism, plant
 (secondary; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: Genetic element
 ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (signal sequence; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: UV B radiation
 (solar, altering plant resistance to; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: Plant cell
 (transformation of; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: Embryophyta
 Plants
 (transgenic; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: 9005-53-2, Lignin, biological studies
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
 (altering lignin biosynthesis; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of

INDEX TERM: plant secondary metabolism
 18696-26-9, Sinapine
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
 (altering sinapoylcholine content; cloning, sequencing and characterization of *Arabidopsis* sinapoylglucose-malate sinapoyltransferase and its use in manipulation of plant secondary metabolism)

INDEX TERM: 390003-54-0D, subfragments are claimed
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process); USES (Uses)
 (amino acid sequence; cloning, sequencing and characterization of *Arabidopsis* sinapoylglucose-malate sinapoyltransferase and its use in manipulation of plant secondary metabolism)

INDEX TERM: 390003-53-9D, subfragments are claimed
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process); USES (Uses)
 (amino acid sequence; cloning, sequencing and characterization of *Arabidopsis* sinapoylglucose-malate sinapoyltransferase and its use in manipulation of plant secondary metabolism)

INDEX TERM: 760000-65-3P, Sinapoylglucose: malate sinapoyltransferase
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (cloning, sequencing and characterization of *Arabidopsis* sinapoylglucose-malate sinapoyltransferase and its use in manipulation of plant secondary metabolism)

INDEX TERM: 65-85-0D, Benzoic acid, monosaccharide ester conjugates
 69-72-7D, α -Hydroxybenzoic acid, monosaccharide ester conjugates 99-06-9D, monosaccharide ester conjugates 99-50-3D, 3,4-Dihydroxybenzoic acid, monosaccharide ester conjugates 121-34-6D, Vanillic acid, monosaccharide ester conjugates 331-39-5D, Caffeic acid, monosaccharide ester conjugates 530-57-4D, Syringic acid, monosaccharide ester conjugates 530-59-6D, Sinapic acid, monosaccharide ester conjugates 537-73-5D, Isoferulic acid, monosaccharide ester conjugates 583-17-5D, α -Cumaric acid, monosaccharide ester conjugates 588-30-7D, monosaccharide ester conjugates 621-82-9D, Cinnamic acid, monosaccharide ester conjugates 1135-24-6D, Ferulic acid, monosaccharide ester conjugates 1782-55-4D, 5-Hydroxyferulic acid, monosaccharide ester conjugates
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
 (cloning, sequencing and characterization of *Arabidopsis* sinapoylglucose-malate sinapoyltransferase and its use in manipulation of plant secondary metabolism)

INDEX TERM: 390003-50-6
 ROLE: AGR (Agricultural use); BCP (Biochemical process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process); USES (Uses)

(nucleotide sequence; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: 390003-51-7D, subfragments are claimed 390003-52-8D, subfragments are claimed

ROLE: AGR (Agricultural use); BCP (Biochemical process); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process); USES (Uses)

(nucleotide sequence; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: 50-69-1D, Ribose, esters 50-99-7D, Glucose, esters 57-48-7D, Fructose, esters 58-86-6D, Xylose, esters 59-23-4D, Galactose, esters 65-42-9D, Lyxose, esters 87-79-6D, Sorbose, esters 147-81-9D, Arabinose, esters 551-84-8D, Xylulose, esters 2152-76-3D, Idose, esters 3019-74-7D, Sedoheptulose, esters 3458-28-4D, Mannose, esters 5556-48-9D, Ribulose, esters 5987-68-8D, Altrose, esters 6038-51-3D, Allose, esters 17598-81-1D, Tagatose, esters 19163-87-2D, Gulose, esters 23140-52-5D, Psicose, esters 30077-17-9D, Talose, esters

ROLE: AGR (Agricultural use); BCP (Biochemical process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(secondary metabolism of; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in manipulation of plant secondary metabolism)

INDEX TERM: 390053-12-0 390053-13-1 390053-14-2 390053-15-3

390053-16-4 390053-17-5

ROLE: PRP (Properties)

(unclaimed nucleotide sequence; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in the manipulation of plant secondary metabolism)

INDEX TERM: 390053-18-6 390053-19-7 390053-20-0

ROLE: PRP (Properties)

(unclaimed protein sequence; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in the manipulation of plant secondary metabolism)

INDEX TERM: 389862-23-1

ROLE: PRP (Properties)

(unclaimed sequence; cloning, sequencing and characterization of *Arabidopsis sinapoylglucose-malate sinapoyltransferase* and its use in the manipulation of plant secondary metabolism)

OS.CITING.REF.COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2007:462047

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S): (1) Anon; WO 9723599 A2 ZCPLUS
(2) Anon; WO 9937786 A2 ZCPLUS

IT 530-57-4D, Syringic acid, monosaccharide ester conjugates

RL: AGR (Agricultural use); BCP (Biochemical process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process);

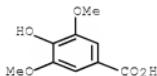
10/810211

USES (Uses)

(cloning, sequencing and characterization of *Arabidopsis* sinapoylglucose-malate sinapoyltransferase and its use in manipulation of plant secondary metabolism)

RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 13 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:833004 ZCPLUS Full-text
DOCUMENT NUMBER: 135:354168
ENTRY DATE: Entered STN: 16 Nov 2001
TITLE: Antimicrobial compositions containing a phenol oxidizing enzyme system and an enhancing agent
INVENTOR(S): Schneider, Palle; Moller, Soren; Biedermann, Kirsten; Johansen, Charlotte
PATENT ASSIGNEE(S): Novozymes A/S, Den.
SOURCE: PCT Int. Appl., 41 pp.
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A01N065-00
SECONDARY: A01N063-02; A01N063-00; A01N065-00; A01N043-84; A01N043-78; A01N043-42; A01N043-38; A01N037-40; A01N037-38; A01N035-10; A01N035-04; A01N033-26; A01N033-10; A01N031-16; A01N031-08; A01N033-06; A01N063-02; A01N043-84; A01N043-78
CLASSIFICATION: 5-2 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001084937	A1	20011115	WO 2001-DK315	20010507 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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US 20020102246	A1	20020801	US 2001-850316	20010507 <--
PRIORITY APPLN. INFO.:			DK 2000-755	A 20000508 <--
			US 2000-204710P	P 20000516 <--

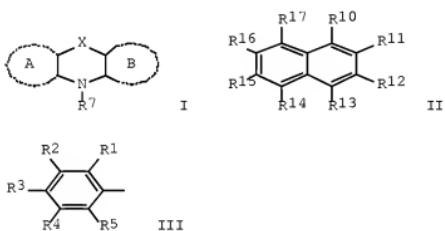
PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2001084937	ICM	A01N065-00
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ICS	A01N063-02; A01N063-00; A01N065-00; A01N043-84; A01N043-78; A01N043-42; A01N043-38; A01N037-40; A01N037-38; A01N035-10; A01N035-04; A01N033-26; A01N033-10; A01N031-16; A01N031-08; A01N033-06; A01N063-02; A01N043-84; A01N043-78
IPCI	A01N0065-00 [ICM,7]; A01N0063-02 [ICS,7]; A01N0063-00 [ICS,7]; A01N0065-00 [ICS,7]; A01N0043-84 [ICS,7]; A01N0043-78 [ICS,7]; A01N0043-42 [ICS,7]; A01N0043-38 [ICS,7]; A01N0043-34 [ICS,7,C*]; A01N0037-40 [ICS,7]; A01N0037-38 [ICS,7]; A01N0037-36 [ICS,7,C*]; A01N0035-10 [ICS,7]; A01N0035-04 [ICS,7]; A01N0035-00 [ICS,7,C*]; A01N0033-26 [ICS,7]; A01N0033-10 [ICS,7]; A01N0031-16 [ICS,7]; A01N0031-08 [ICS,7]; A01N0031-00 [ICS,7,C*]; A01N0033-06 [ICS,7]; A01N0033-00 [ICS,7,C*]; A01N0063-02 [ICS,7]; A01N0043-84 [ICS,7]; A01N0043-78 [ICS,7]; A01N0043-72 [ICS,7,C*];
IPCR	A01N0063-00 [I,C*]; A01N0063-00 [I,A]; A01N0063-02 [I,C*]; A01N0063-02 [I,A]; A01N0065-00 [I,C*]; A01N0065-00 [I,A]
ECLA	A01N063/00+M; A01N063/02+M; A01N065/00+; A01N065/00+M
IPCI	A61K0038-44 [ICM,7]; A61K0038-43 [ICM,7,C*]; A61K007-00 [ICS,7]
IPCR	A01N0063-00 [I,C*]; A01N0063-00 [I,A]
NCL	424/094.400; 424/401.000; 510/320.000
ECLA	A01N063/00+M MARPAT 135:354168

OTHER SOURCE(S):
GRAPHIC IMAGE:



ABSTRACT:

An enzymic antimicrobial composition comprises a phenol oxidizing enzyme system and an enhancing agent selected from I, C-X-D, ER6, and II, in which C, D, and E independently of each other are III (R1, R2, R3, R4, R5, R6, R7, R10, R11, R12, R13, R14, R15, R16, R17 = H, OH, C1-8-alkyl, acyl, SO3H, NO2, CN, Cl, Br, F, NHR8, N(R8)2, OR9, C1-8-alkyl-OR9, or C1-8-alkyl-OOR9; wherein R8, R9 = H, C1-4-alkyl or acyl; X = single bond, NH, NCH3, NC2H5, O, S, N=N, CH=N, or CH=CH; A, B = (un)substituted six membered aromatic rings). The composition is used for killing or inhibiting microbial cells or micro-organisms, e.g. in laundry, on hard surfaces, in water systems, on skin, on teeth or on mucous membranes.

10/810211

It is also used for preserving food products, cosmetics, paints, coatings, etc.

SUPPL. TERM: antimicrobial phenol oxidizing enzyme laccase peroxidase
INDEX TERM: Antimicrobial agents
 (antimicrobial compns. containing phenol oxidizing enzyme system and enhancing agent)
INDEX TERM: Cosmetics
 Laundering
 (antimicrobial compns. containing phenol oxidizing enzyme system and enhancing agent for)
INDEX TERM: *Pseudomonas putida*
 (enzymic antimicrobial composition activity against)
INDEX TERM: Enzymes, biological studies
ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (phenol oxidizing; antimicrobial composition containing)
INDEX TERM: 7722-84-1, Hydrogen peroxide, biological studies
9003-99-0D, Peroxidase, *Bacillus* 9003-99-0D, Peroxidase, *Coprinus cinereus* 9003-99-0D, Peroxidase, *Coprinus macrorhizus* 9003-99-0D, Peroxidase, *Soybean* 80498-15-3D, Laccase,, *Coprinus cinereus* 80498-15-3D, Laccase,, *Pycnoporus cinnabarinus* 80498-15-3D, Laccase,, *Rhizoctonia solani* 173402-34-1, Laccase, prepro-(*Scytalidium thermophilum* clone pShTh6 gene lccS) 209337-91-7, Laccase (*Mycelopiphthora thermophila*)
ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (antimicrobial composition containing)
INDEX TERM: 83-56-7, 1,5-Naphthalenediol 92-88-6,
[1,1'-Biphenyl]-4,4'-diol 123-30-8 343-27-1, Harmine hydrochloride 578-66-5, 8-Quinolinamine 582-17-2,
2,7-Naphthalenediol 836-44-2 884-35-5
889-37-2 1965-09-9 2243-62-1, 1,5-Naphthalenediamine 2283-08-1 2496-15-3 5060-82-2 6369-04-6 7400-08-0,
p-Cumaric acid 23517-76-2 25782-99-4 27151-57-1
54827-17-7 57102-94-0 153004-35-4 372188-65-3
ROLE: MOA (Modifier or additive use); USES (Uses)
 (enhancing agent in enzymic antimicrobial composition containing
 phenol oxidizing enzyme)
INDEX TERM: 9003-99-0, Peroxidase
ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (horseradish; antimicrobial composition containing)
OS.CITING.REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009
OS.CITING.REFS: CAPLUS 2003:875036; 2003:22652; 2003:22651; 2003:22650;
 2003:22649; 2003:22643
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD.
REFERENCE(S): (1) Busch Alfred; WO 9743383 A 1997 ZCAPLUS
 (2) Damhus Ture; WO 9610079 A 1996 ZCAPLUS
 (3) Ebdrup Soren; WO 9412619 A 1994 ZCAPLUS
 (4) Ebdrup Soren; WO 9412621 A 1994 ZCAPLUS
 (5) Henriksen Lotte Rugholm; WO 9741215 A 1997 ZCAPLUS
 (6) Novo Nordisk AS; WO 0068324 A 2000 ZCAPLUS
 (7) Novonordisk AS; WO 9218683 A 1992 ZCAPLUS
 (8) Novonordisk AS; WO 9606930 A 1996 ZCAPLUS

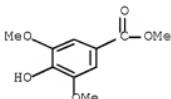
(9) Novonordisk AS; WO 9742825 A 1997 ZCPLUS
 (10) Novonordisk AS; WO 9923887 A 1999 ZCPLUS
 (11) Orndorff Steve, A; US 4478683 A 1984

IT 884-35-5

RL: MOA (Modifier or additive use); USES (Uses)
 (enhancing agent in enzymic antimicrobial composition containing phenol
 oxidizing enzyme)

RN 884-35-5 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy-, methyl ester (CA INDEX NAME)



L92 ANSWER 14 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:185033 ZCPLUS Full-text
 DOCUMENT NUMBER: 134.221768
 ENTRY DATE: Entered STN: 16 Mar 2001
 TITLE: Freshness-retaining agent and its use for
 agricultural or horticultural products
 INVENTOR(S): Iijima, Yoshihiko
 PATENT ASSIGNEE(S): Dainichiseika Color & Chemicals Mfg. Co. Ltd., Japan
 SOURCE: Eur. Pat. Appl., 13 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 INT. PATENT CLASSIF.:
 MAIN: A23B007-10
 SECONDARY: A23B007-157; A23B007-144; A23B009-18; A23B009-30;
 A23B009-26
 CLASSIFICATION: 17-4 (Food and Feed Chemistry)
 Section cross-reference(s): 5
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1082906	A2	20010314	EP 2000-118268	20000818 <--
EP 1082906	A3	20030813		
EP 1082906	B1	20060816		
R: AT, BE, CH, IE, SI, LT, LV, FI, RO				
CA 2317328	A1	20010310	CA 2000-2317328	20000901 <--
CA 2317328	C	20080108		
ES 2269048	T3	20070401	ES 2000-118268	20000904 <--
CN 1287958	A	20010321	CN 2000-126934	20000908 <--
US 6340654	B1	20020122	US 2000-657904	20000908 <--
TW 228973	B	20050311	TW 2000-89117297	20000927 <--
KR 2005081181	A	20050818	KR 2005-54911	20050624 <--
PRIORITY APPLN. INFO.:			JP 1999-257261	A 19990910 <--
			JP 1999-257262	A 19990910 <--

PATENT CLASSIFICATION CODES:		
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1082906	ICM	A23B007-10
	ICS	A23B007-157; A23B007-144; A23B009-18; A23B009-30;
	A23B009-26	A23L0003-34
	IPCI	A01N0003-00 [I,C]; A23B0007-10 [I,C]; A23B0007-14 [I,C]; A23B0007-144 [I,C]; A23B0009-00 [I,C]; A23L0003-34 [I,C]; B65D0081-28 [I,C]; A23B0007-10 [I,A]; A01N0003-00 [I,A]; A23B0007-144 [I,A]; A23B0007-157 [I,A]; A23B0009-18 [I,A]; A23B0009-26 [I,A]; A23B0009-30 [I,A]; A23L0003-3418 [I,A]; A23L0003-3445 [I,A]; B65D0081-28 [I,A]; A23B0007-154 [I,A]
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	IPCR	A23B0007-14 [I,C]; A23B0007-157 [I,A]; A01N0003-00 [I,C]; A01N0003-00 [I,A]; A01N0003-02 [I,A]; A23B0007-10 [I,C]; A23B0007-144 [I,C]; A23B0007-14 [I,A]; A23B0007-144 [I,A]; A23B0007-154 [I,A]; A23B0009-00 [I,C*]; A23B0009-18 [I,A]; A23B0009-26 [I,A]; A23B0009-30 [I,A]; A23L0003-3454 [I,C]; A23L0003-3463 [I,C]; A23L0003-3463 [I,A]; A23L0003-358 [I,A]
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ES 2269048	IPCI	A23B0007-10 [I,C]; A23B0007-10 [I,A]; A01N0003-00 [I,C]; A01N0003-00 [I,A]; A23B0007-14 [I,C]; A23B0007-144 [I,C]; A23B0007-144 [I,A]; A23B0007-157 [I,A]; A23B0009-00 [I,C]; A23B0009-18 [I,A]; A23B0009-26 [I,A]; A23B0009-30 [I,A]; A23L0003-34 A [I,C]; A23L0003-3418 [I,A]; A23L0003-3445 [I,A]; B65D0081-28 [I,C]; B65D0081-28 [I,A]
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	ECLA	A23B007/10; A23B007/144; A23B007/154; A23B007/157; A23B009/18; A23B009/26; A23B009/30
CN 1287958	IPCI	B65D0081-28 [ICM,7]; A23B0007-10 [ICS,7]; A23B0071-48 [ICS,7]
	IPCR	A23B0007-10 [I,C*]; A23B0007-10 [I,A]; A23B0007-14 [I,C*]; A23B0007-144 [I,C*]; A23B0007-144 [I,A]; A23B0007-154 [I,A]; A23B0007-157 [I,A]; A23B0009-00 [I,C*]; A23B0009-18 [I,A]; A23B0009-26 [I,A]; A23B0009-30 [I,A]
	ECLA	A23B007/10; A23B007/144; A23B007/154; A23B007/157; A23B009/18; A23B009/26; A23B009/30
US 6340654	IPCI	A01N0003-02 [ICM,7]; A01N0003-00 [ICM,7,C*]; A23B0007-144 [ICS,7,C*]

	IPCR	A23B0007-10 [I,C*]; A23B0007-10 [I,A]; A23B0007-14 [I,C*]; A23B0007-144 [I,C*]; A23B0007-144 [I,A]; A23B0007-154 [I,A]; A23B0007-157 [I,A]; A23B0009-00 [I,C*]; A23B0009-18 [I,A]; A23B0009-26 [I,A]; A23B0009-30 [I,A]
	NCL	504/114.000; 426/312.000; 426/477.000; 426/562.000
	ECLA	A23B007/10; A23B007/144; A23B007/154; A23B007/157; A23B009/18; A23B009/26; A23B009/30
TW 228973	IPCI	A01N0003-02 [ICS,7]; A01N0003-00 [ICS,7,C*]; A23B0007-10 [ICS,7]
	IPCR	A23B0007-10 [I,C*]; A23B0007-10 [I,A]; A23B0007-14 [I,C*]; A23B0007-144 [I,C*]; A23B0007-144 [I,A]; A23B0007-154 [I,A]; A23B0007-157 [I,A]; A23B0009-00 [I,C*]; A23B0009-18 [I,A]; A23B0009-26 [I,A]; A23B0009-30 [I,A]
	ECLA	A23B007/10; A23B007/144; A23B007/154; A23B007/157; A23B009/18; A23B009/26; A23B009/30
KR 2005081181	IPCI	A23B0007-144 [ICM,7]
	ECLA	A23B007/10; A23B007/144; A23B007/154; A23B007/157; A23B009/18; A23B009/26; A23B009/30

ABSTRACT:

A freshness-retaining agent for an agricultural or horticultural product comprises an organic acid and a hydrogen carbonate. The organic acid may preferably be an organic acid which in the presence of water given off from the agricultural or horticultural product, reacts with the hydrogen carbonate such that carbon dioxide gas is gradually generated, for example, cinnamic acid, benzoic acid or citric acid or a derivative thereof. The hydrogen carbonate may preferably be sodium bicarbonate. The freshness of the agricultural or horticultural product can be retained by causing the freshness-retaining agent to exist in the same atmospheric as the agricultural or horticultural product such that the freshness-retaining agent is allowed to gradually generate carbon dioxide gas in the presence of water given off from the agricultural or horticultural product.

SUPPL. TERM:	food horticulture plant freshness carboxylate bicarbonate
INDEX TERM:	Polymers, biological studies
	ROLE: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
	(acidic group-containing; freshness-retaining agent and its use for agricultural or horticultural products)
INDEX TERM:	Plant (Embryophyta)
	(edible; freshness-retaining agent and its use for agricultural or horticultural products)
INDEX TERM:	Phosphates, biological studies
	Sulfates, biological studies
	ROLE: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
	(esters, polymers containing; freshness-retaining agent and its use for agricultural or horticultural products)
INDEX TERM:	Apple
	Crop (plant)
	Food preservation
	Plant (Embryophyta)
	(freshness-retaining agent and its use for agricultural or horticultural products)
INDEX TERM:	Bicarbonates
	Carboxylic acids, biological studies
	ROLE: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(freshness-retaining agent and its use for agricultural or horticultural products)

INDEX TERM: Food
(plant products; freshness-retaining agent and its use for agricultural or horticultural products)

INDEX TERM: Carboxyl group
(polymers containing; freshness-retaining agent and its use for agricultural or horticultural products)

INDEX TERM: Sulfonates
ROLE: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(polymers containing; freshness-retaining agent and its use for agricultural or horticultural products)

INDEX TERM: 56-86-0, L-Glutamic acid, biological studies 59-67-6, Nicotinic acid, biological studies 65-85-0, Benzoic acid, biological studies 69-72-7, Salicylic acid, biological studies 77-92-9, Citric acid, biological studies 97-65-4, Itaconic acid, biological studies 110-44-1, Sorbic acid 112-38-9, Undecylenic acid 121-34-6, Vanillic acid 124-04-9, Adipic acid, biological studies 144-33-2, Disodium citrate 144-55-8, Sodium bicarbonate, biological studies 331-39-5, Caffeic acid 530-57-4, Syringic acid 621-82-9, Cinnamic acid, biological studies 1135-24-6, Ferulic acid 7400-08-0, p-Coumaric acid 18996-35-5, Monosodium citrate
ROLE: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(freshness-retaining agent and its use for agricultural or horticultural products)

INDEX TERM: 124-38-9, Carbon dioxide, biological studies
ROLE: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(freshness-retaining agent and its use for agricultural or horticultural products)

INDEX TERM: 7732-18-5, Water, biological studies
ROLE: BSU (Biological study, unclassified); MFM (Metabolic formation); RCT (Reactant); BIOL (Biological study); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(freshness-retaining agent and its use for agricultural or horticultural products)

INDEX TERM: 110-17-8, Fumaric acid, biological studies 298-14-6, Potassium bicarbonate 1066-33-7, Ammonium bicarbonate 9003-01-4, Polyacrylic acid
ROLE: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(freshness-retaining agent and its use for agricultural or horticultural products)

INDEX TERM: 74-85-1, Ethylene, processes
ROLE: REM (Removal or disposal); PROC (Process)
(freshness-retaining agent and its use for agricultural or horticultural products)

OS.CITING.REF.COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2004:203341

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S): (1) Anon; EP 0845262 A1 ZCPLUS

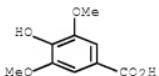
- (2) Anon; GB 1442979 A ZCPLUS
- (3) Anon; US 2500919 A ZCPLUS
- (4) Anon; US 3891756 A ZCPLUS
- (5) Anon; US 4032374 A ZCPLUS
- (6) Anon; US 4777033 A ZCPLUS
- (7) Anon; US 5489399 A ZCPLUS
- (8) Anon; US 6083535 A ZCPLUS
- (9) Anon; WO 9745103 A1 ZCPLUS

IT 530-57-4, Syringic acid

RL: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(freshness-retaining agent and its use for agricultural or horticultural products)

RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 15 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:152427 ZCPLUS Full-text
 DOCUMENT NUMBER: 134:174268
 ENTRY DATE: Entered STN: 02 Mar 2001
 TITLE: Insecticides and microbicides for plants
 INVENTOR(S): Schuer, Joerg
 Germany
 PATENT ASSIGNEE(S): PCT Int. Appl., 39 pp.
 SOURCE: CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 INT. PATENT CLASSIF.:
 MAIN: A01N031-04
 SECONDARY: A01N037-40; A01N031-04; A01N065-00; A01N037-40;
 A01N037-36; A01N031-02; A01N037-40; A01N065-00;
 A01N037-36; A01N031-04; A01N031-02
 CLASSIFICATION: 5-4 (Agrochemical Bioregulators)
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001013727	A1	20010301	WO 2000-EP8344	20000825 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19940283	A1	20010301	DE 1999-19940283	19990825 <--
CA 2382740	A1	20010301	CA 2000-2382740	20000825 <--

EP 1206184	A1	20020522	EP 2000-969251	20000825 <--
EP 1206184	B1	20050119		
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JP 2003507397	T	20030225	JP 2001-517880	20000825 <--
AU 778900	B2	20041223	AU 2000-79038	20000825 <--
AT 287211	T	20050215	AT 2000-969251	20000825 <--
ES 2235960	T3	20050716	ES 2000-969251	20000825 <--
ZA 2002001510	A	20030311	ZA 2002-1510	20020222 <--
US 20080045587	A1	20080221	US 2007-780408	20070719 <--
PRIORITY APPLN. INFO.:				
			DE 1999-19940283	A 19990825 <--
			WO 2000-EP8344	W 20000825 <--
			US 2002-69476	B1 20020701 <--

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
WO 2001013727	ICM	A01N031-04		
	ICS	A01N037-40; A01N031-04; A01N065-00; A01N037-40; A01N037-36; A01N031-02; A01N037-40; A01N065-00; A01N037-36; A01N031-04; A01N031-02		
	IPCI	A01N0031-04 [ICM, 7]; A01N0037-40 [ICS, 7]; A01N0031-04 [ICS, 7]; A01N0065-00 [ICS, 7]; A01N0037-36 [ICS, 7];		
	IPCR	A01N0031-02 [ICS, 7]; A01N0031-00 [ICS, 7, C*]		
	ECLA	A01N0025-02 [I, C*]; A01N0025-02 [I, A]; A01N0031-00 [I, C*]; A01N0031-04 [I, A]; A01N0031-16 [I, A]; A01N0037-36 [I, C*]; A01N0037-40 [I, A]; A01N0065-00 [I, C]; A01N0065-00 [I, A]		
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	IPCR	A01N0025-02 [I, C*]; A01N0025-02 [I, A]; A01N0031-00 [I, C*]; A01N0031-04 [I, A]; A01N0031-16 [I, A]; A01N0037-36 [I, C*]; A01N0037-40 [I, A]; A01N0065-00 [I, C*]; A01N0065-00 [I, A]		
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CA 2382740	IPCI	A01N0031-04 [ICM, 7]; A01N0065-00 [ICS, 7]; A01N0031-02 [ICS, 7]; A01N0031-00 [ICS, 7, C*]; A01N0037-36 [ICS, 7]; A01N0037-40 [ICS, 7]		
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	IPCR	A01N0025-02 [I, C*]; A01N0025-02 [I, A]; A01N0031-00 [I, C*]; A01N0031-04 [I, A]; A01N0031-16 [I, A]; A01N0037-36 [I, C*]; A01N0037-40 [I, A]; A01N0065-00 [I, C]; A01N0065-00 [I, A]		
	ECLA	A01N0031/04+M; A01N0037/40+M		
JP 2003507397	IPCI	A01N0025-02 [ICM, 7]; A01N0031-04 [ICS, 7]; A01N0031-16 [ICS, 7]; A01N0031-00 [ICS, 7, C*]; A01N0065-00 [ICS, 7]		
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	ECLA	A01N0031/04+M; A01N0037/40+M		
AU 778900	IPCI	A01N0031-04 [ICM, 7]; A01N0031-02 [ICS, 7]; A01N0031-00		

		[ICS, 7,C*]; A01N0037-36 [ICS, 7]; A01N0037-40 [ICS, 7]; A01N0065-00 [ICS, 7]
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ES 2235960	IPCI	A01N0031-04 [ICM, 7]; A01N0037-40 [ICS, 7]; A01N0065-00 [ICS, 7]; A01N0037-36 [ICS, 7]; A01N0031-02 [ICS, 7]; A01N0031-00 [ICS, 7,C*]
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	ECLA	A01N031/04+M; A01N037/40+M
US 20080045587	IPCI	A01N0043-16 [I,A]; A01N0043-02 [I,C*]; A01N0031-00 [I,A]; A01P0001-00 [I,A]
	IPCR	A01N0025-02 [I,C*]; A01N0025-02 [I,A]; A01N0043-02 [I,C]; A01N0043-16 [I,A]; A01N0031-00 [I,C]; A01N0031-00 [I,A]; A01N0031-04 [I,A]; A01N0031-16 [I,A]; A01N0037-36 [I,C*]; A01N0037-40 [I,A]; A01N0065-00 [I,C]; A01N0065-00 [I,A]; A01P0001-00 [I,C]; A01P0001-00 [I,A]
	NCL	514/460.000; 514/730.000
	ECLA	A01N031/04+M; A01N037/40+M

ABSTRACT:

The invention relates to agents for protecting plants and/or parts of plants from insects and insect larvae and from microbial attack. The agents are lipophilic GRAS (generally recognized as safe) flavoring compds and hydrophilic GRAS. The lipophilic GRAS flavoring compds. are alcs. (benzyl alc., 1- or 2-phenylethanol, cinnamic alc., hydrocinnamic alc., etc.). The hydrophilic GRAS agents are alcs. (ethanol, propanol, isopropanol, etc.) or organic acids.

SUPPL. TERM:	GRAS flavoring agent insecticide microbicide plant
INDEX TERM:	Flavoring materials (GRAS; insecticides and microbicides for plants or plant parts)
INDEX TERM:	Camellia primula (extract; insecticides and microbicides for plants or plant parts)
INDEX TERM:	Tannins
	ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (insecticide and microbicide for plants or plant parts)

INDEX TERM: Antibacterial agents
 Cereal (grain)
 Cocoa (*Theobroma cacao*)
 Coffee (*Coffea*)
 Corn
 Cotton
 Fruit tree
 Insecticides
 Legume (Fabaceae)
 Nut (seed)
 Potato (*Solanum tuberosum*)
 Rice (*Oryza sativa*)
 Seed
 Spices
 Tea (*Camellia sinensis*)
 Tobacco
 (insecticides and microbicides for
 plants or plant parts)

INDEX TERM: Acetals
 Alcohols, biological studies
 Aldehydes, biological studies
 Anthocyanins
 Essential oils
 Flavanols
 Flavones
 Flavonoids
 Phenols, biological studies
 Terpenes, biological studies
 ROLE: AGR (Agricultural use); BIOL (Biological study); USES
 (Uses)
 (insecticides and microbicides for
 plants or plant parts)

INDEX TERM: Esters, biological studies
 ROLE: AGR (Agricultural use); BIOL (Biological study); USES
 (Uses)
 (lipophilic; insecticides and
 microbicides for plants or
 plant parts)

INDEX TERM: Acids, biological studies
 ROLE: AGR (Agricultural use); BIOL (Biological study); USES
 (Uses)
 (organic; insecticides and microbicides
 for plants or plant parts)

INDEX TERM: Plant (Embryophyta)
 (ornamental; insecticides and
 microbicides for plants or
 plant parts)

INDEX TERM: Phenols, biological studies
 ROLE: AGR (Agricultural use); BIOL (Biological study); USES
 (Uses)
 (polyphenols, nonpolymeric; insecticide and
 microbicide for plants or plant
 parts)

INDEX TERM: 50-21-5, Lactic acid, biological studies 56-81-5,
 Glycerol, biological studies 57-55-6, Propylene glycol,
 biological studies 60-12-8, 2-Phenylethanol 62-54-4,
 Calcium acetate 64-17-5, (Ethanol, biological studies
 64-18-6, Formic acid, biological studies 64-19-7, Acetic
 acid, biological studies 67-63-0, Isopropanol, biological
 studies 71-23-8, Propanol, biological studies 71-36-3,

Butanol, biological studies 71-41-0, Amyl alcohol, biological studies 77-92-9, Citric acid, biological studies 78-70-6, Linalool 78-83-1, Isobutanol, biological studies 87-69-4, Tartaric acid, biological studies 90-64-2, Mandelic acid 93-54-9, 1-Phenyl-1-propanol 98-01-1, Furfurol, biological studies 98-85-1, 1-Phenylethanol 100-51-6, (Benzyl alcohol, biological studies 102-76-1, Triacetin 103-82-2, Phenylacetic acid, biological studies 104-54-1, Cinnamic alcohol 105-13-5, Anisic alcohol 106-22-9, Citronellol 106-24-1, Geraniol 110-17-8, Fumaric acid, biological studies 111-27-3, Hexyl alcohol, biological studies 111-70-6, Heptyl alcohol 111-87-5, Octyl alcohol, biological studies 112-30-1, Decanol 112-43-6, 10-Undecenol 112-53-8, 1-Dodecanol 121-33-5, Vanillin 122-97-4, Hydrocinnamic alcohol 123-38-6, Propionaldehyde, biological studies 123-51-3, IsoAmyl alcohol 127-08-2, Potassium acetate 127-09-3, Sodium acetate 142-50-7, Nerolidol 143-08-8, Nonyl alcohol 470-82-6, Cineol 499-12-7, Aconitic acid 507-70-0, Borneol 513-86-0, Acetoin 536-60-7, Cuminal alcohol 539-86-6, Allicin 2216-51-5 6812-78-8, Rhodinol 6915-15-7, Malic acid 8000-41-7, Terpineol 36653-82-4, 1-Hexadecanol 186209-48-3, Nonadienol

ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(insecticide and microbicide for plants or plant parts)

INDEX TERM: 87-66-1, Pyrogallol 108-46-3, Resorcinol, biological studies 108-73-6, Phloroglucinol 109-52-4, Valeric acid, biological studies 110-82-7, Cyclohexane, biological studies 112-05-0, Pelargonic acid 120-80-9, Pyrocatechol, biological studies 122-59-8, Phenoxyacetic acid 123-31-9, Hydroquinone, biological studies 124-04-9, Adipic acid, biological studies 125-46-2, Usnic acid 142-62-1, Capronic acid, biological studies 149-91-7D, Gallic acid, derivs. 331-39-5, Caffeic acid 501-36-0, Resveratrol 503-74-2, IsoValeric acid 621-82-9, Cinnamic acid, biological studies 9005-53-2, Lignin, biological studies

ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(insecticides and microbicides for plants or plant parts)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2008:1002765; 2002:885967

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):

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- (3) Delpech, L; FR 2228434 A 1974 ZCAPLUS
- (4) Doi, K; JP 04069308 A 1992 ZCAPLUS
- (5) Ecosmart Technologies Inc; WO 9854971 A 1998 ZCAPLUS
- (6) McCormac Dennis J Doing Busine; WO 9531100 A 1995 ZCAPLUS
- (7) Menno Chemie Vertriebsges Mbh; WO 0027192 A 2000
- (8) Nakano Sumese Kk; JP 04316506 A 1992 ZCAPLUS
- (9) Rod, R; US 5814325 A 1998 ZCAPLUS

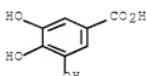
- (10) Schuer, J; WO 9629895 A 1996 ZCPLUS
- (11) Schuer, J; WO 9858540 A 1998 ZCPLUS
- (12) Schuer, J; WO 0003612 A 2000
- (13) Shioi, K; JP 46028797 B
- (14) Sterling Drug Inc; CA 2012288 A 1990 ZCPLUS
- (15) Thorsell, W; SE 8900902 A 1989 ZCPLUS

IT 149-91-7D, Gallic acid, derivs.

RL: AGR (Agricultural use); BIOL (Biological study); USES
 (Uses)
 (insecticides and microbicides for plants
 or plant parts)

RN 149-91-7 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



L92 ANSWER 16 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:106343 ZCPLUS Full-text
 DOCUMENT NUMBER: 134:158825
 ENTRY DATE: Entered STN: 13 Feb 2001
 TITLE: Antibacterial materials, deodorants, repellents, and
 dehumidifying materials
 INVENTOR(S): Shimada, Tsumoru; Ikuma, Kazuhito; Inamoto, Tetsuya
 PATENT ASSIGNEE(S): Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 INT. PATENT CLASSIF.:
 MAIN: A01N059-16
 SECONDARY: A01N059-16; A01N025-08; A01N059-06; A01N059-20;
 A61L009-01; C09K015-00
 CLASSIFICATION: 5-2 (Agrochemical Bioregulators)
 Section cross-reference(s): 17, 59, 60
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001039809	A	20010213	JP 1999-246049	19990727 <--
PRIORITY APPLN. INFO.:			JP 1999-246049	19990727 <--
PATENT CLASSIFICATION CODES:				
PATENT NO.	CLASS	PATENT FAMILY	CLASSIFICATION CODES	
JP 2001039809	ICM	A01N059-16		
	ICS	A01N059-16; A01N025-08; A01N059-06; A01N059-20; A61L009-01; C09K015-00		
	IPCI	A01N0059-16 [ICM,7]; A01N0059-16 [ICS,7]; A01N0025-08 [ICS,7]; A01N0059-06 [ICS,7]; A01N0059-20 [ICS,7]; A61L0009-01 [ICS,7]; C09K0015-00 [ICS,7]		
	IPCR	A61L0009-01 [I,C*]; A61L0009-01 [I,A]; A01N0025-08 [I,C*]; A01N0025-08 [I,A]; A01N0059-06 [I,C*];		

A01N0059-06 [I,A]; A01N0059-16 [I,C*]; A01N0059-16
 [I,A]; A01N0059-20 [I,A]; C09K0015-00 [I,C*];
 C09K0015-00 [I,A]

ABSTRACT:

The materials are rice husk carbon which are mixed with solns. containing metal-fixing agents and/or antioxidants and metals and dried. Rice husk carbon was mixed with an aqueous solution containing CuSO₄, Zn(NO₃)₂, EDTA-4Na, and lauryldiaminoethylglycine Na (Nissan Anon LG) and dried to give a material, which totally controlled *Staphylococcus aureus* and *Escherichia coli*.

SUPPL. TERM: rice husk carbon metal bactericide deodorant;
 antioxidant metal bactericide repellent rice husk;
 recycling waste rice husk bactericide deodorant; air
 deodorization dehumidification rice husk carbon
 INDEX TERM: Tocopherols
 ROLE: BUU (Biological use, unclassified); TEM (Technical or
 engineered material use); BIOL (Biological study); USES
 (Uses)
 (antioxidant; rice husk carbon mixed with
 metals for antibacterial, deodorant, repellent, and
 dehumidifying materials)
 INDEX TERM: Air conditioning
 (dehumidification; rice husk carbon mixed with
 metals for antibacterial, deodorant, repellent, and
 dehumidifying materials)
 INDEX TERM: Air purification
 (deodorization; rice husk carbon mixed with
 metals for antibacterial, deodorant, repellent, and
 dehumidifying materials)
 INDEX TERM: Wastes
 (food-processing, rice husk; rice
 husk carbon mixed with metals for antibacterial,
 deodorant, repellent, and dehumidifying materials)
 INDEX TERM: Rice (*Oryza sativa*)
 (husk; rice husk carbon mixed with metals for
 antibacterial, deodorant, repellent, and dehumidifying
 materials)
 INDEX TERM: Carboxylic acids, biological studies
 ROLE: BUU (Biological use, unclassified); TEM (Technical or
 engineered material use); BIOL (Biological study); USES
 (Uses)
 (metal-fixing agents; rice husk carbon mixed
 with metals for antibacterial, deodorant, repellent, and
 dehumidifying materials)
 INDEX TERM: Antibacterial agents
 Antioxidants
 Chelating agents
 Deodorants
 Insect repellents
 (rice husk carbon mixed with metals for
 antibacterial, deodorant, repellent, and dehumidifying
 materials)
 INDEX TERM: Metals, biological studies
 ROLE: BAC (Biological activity or effector, except adverse);
 BSU (Biological study, unclassified); BUU (Biological use,
 unclassified); TEM (Technical or engineered material use);
 BIOL (Biological study); USES (Uses)
 (rice husk carbon mixed with metals for
 antibacterial, deodorant, repellent, and dehumidifying
 materials)

INDEX TERM: Chaff
 (rice husk; rice husk carbon mixed with metals for antibacterial, deodorant, repellent, and dehumidifying materials)

INDEX TERM: Charcoal
 ROLE: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (rice husk; rice husk carbon mixed with metals for antibacterial, deodorant, repellent, and dehumidifying materials)

INDEX TERM: Food processing
 (wastes, rice husk; rice husk carbon mixed with metals for antibacterial, deodorant, repellent, and dehumidifying materials)

INDEX TERM: 50-81-7, Ascorbic acid, biological studies 89-65-6, Isoascorbic acid 96-27-5, Thioglycerol 121-79-9, Propyl gallate 7681-57-4, Sodium pyrosulfite 7757-83-7, Sodium sulfite 7772-98-7, Sodium thiosulfate 10117-38-1, Potassium sulfite 16731-55-8, Potassium pyrosulfite 24531-57-5, Thiosorbitol 25013-16-5, Butylhydroxyanisole 30587-81-6, Dibutylhydroxytoluene
 ROLE: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (antioxidant; rice husk carbon mixed with metals for antibacterial, deodorant, repellent, and dehumidifying materials)

INDEX TERM: 56-84-8, Aspartic acid, biological studies 56-86-0, Glutamic acid, biological studies 60-00-4, EDTA, biological studies 64-02-8, EDTA tetrasodium salt 77-92-9, Citric acid, biological studies 110-15-6, Succinic acid, biological studies 110-16-7, Maleic acid, biological studies 141-82-2, Malonic acid, biological studies 144-62-7, Oxalic acid, biological studies 18694-07-0, Hexametaphosphoric acid
 ROLE: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (metal-fixing agent; rice husk carbon mixed with metals for antibacterial, deodorant, repellent, and dehumidifying materials)

INDEX TERM: 74-93-1, Methyl mercaptan, processes 7664-41-7, Ammonia, processes 7783-06-4, Hydrogen sulfide, processes
 ROLE: REM (Removal or disposal); PROC (Process)
 (removal; rice husk carbon mixed with metals for antibacterial, deodorant, repellent, and dehumidifying materials)

INDEX TERM: 7429-90-5, Aluminum, biological studies 7439-89-6, Iron, biological studies 7439-92-1, Lead, biological studies 7439-96-5, Manganese, biological studies 7440-02-0, Nickel, biological studies 7440-22-4, Silver, biological studies 7440-31-5, Tin, biological studies 7440-32-6, Titanium, biological studies 7440-48-4, Cobalt, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies 7440-67-7, Zirconium, biological studies 7440-69-9, Bismuth, biological studies 7758-98-7, Cupric sulfate, biological studies 7779-88-6, Zinc nitrate 10377-66-9, Manganese dinitrate 10421-48-4, Ferric nitrate

ROLE: BAC (Biological activity or effector, except adverse);
 BSU (Biological study, unclassified); BUU (Biological use, unclassified); TEM (Technical or engineered material use);
 BIOL (Biological study); USES (Uses)
 (rice husk carbon mixed with metals for
 antibacterial, deodorant, repellent, and dehumidifying
 materials)

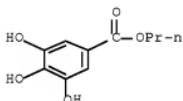
INDEX TERM: 7440-44-0, Carbon, biological studies
 ROLE: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (rice husk; rice husk carbon mixed with metals for
 antibacterial, deodorant, repellent, and dehumidifying materials)

IT 121-79-9, Propyl gallate

RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (antioxidant; rice husk carbon mixed with metals for
 antibacterial, deodorant, repellent, and dehumidifying materials)

RN 121-79-9 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy-, propyl ester (CA INDEX NAME)



L92 ANSWER 17 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2000:842294 ZCPLUS Full-text
 DOCUMENT NUMBER: 134:1333
 ENTRY DATE: Entered STN: 01 Dec 2000
 TITLE: Improved method for agrobacterium mediated transformation of cotton
 INVENTOR(S): Reynaerts, Arlette; De Sonville, Anne
 PATENT ASSIGNEE(S): Aventis CropScience NV, Belg.
 SOURCE: PCT Int. Appl., 32 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 INT. PATENT CLASSIF.:
 MAIN: C12N015-82
 CLASSIFICATION: 3-1 (Biochemical Genetics)
 Section cross-reference(s): 9, 11
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000071733	A1	20001130	WO 2000-EP4611	20000518 --
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,				

LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

BR 2000010749 A 20020219 BR 2000-10749 20000518 <--

EP 1183377 A1 20020306 EP 2000-936770 20000518 <--

EP 1183377 B1 20070620

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, PT, IE, SI, LT, LV, FI, RO, CY

TR 200103311 T2 20020422 TR 2001-3311 20000518 <--

AU 772686 B2 20040506 AU 2000-52148 20000518 <--

CN 1234869 C 20060104 CN 2000-807727 20000518 <--

AT 365218 T 20070715 AT 2000-936770 20000518 <--

ES 2288478 T3 20080116 ES 2000-936770 20000518 <--

US 6483013 B1 20021119 US 2000-573555 20000519 <--

MX 2001011871 A 20030904 MX 2001-11871 20011116 <--

ZA 2001009521 A 20021119 ZA 2001-9521 20011119 <--

IN 2001CN01741 A 20070420 IN 2001-CN1741 20011211 <--

PRIORITY APPLN. INFO.:

US 1999-219317P P 19990519 <--

US 1999-314449 A 19990519 <--

WO 2000-EP4611 W 20000518 <--

PATENT CLASSIFICATION CODES:

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 2000071733 IPCI C12N0015-82
IPCI C12N0015-82 [ICM,7]
IPCR C12N0015-82 [I,C*]; C12N0015-82 [I,A]
ECLA C12N015/82A4B

BR 2000010749 IPCI C12N0015-82 [ICM,7]
IPCR C12N0015-82 [I,C*]; C12N0015-82 [I,A]
ECLA C12N015/82A4B

EP 1183377 IPCI C12N0015-82 [I,C]; C12N0015-82 [I,A]
IPCR C12N0015-82 [I,C]; C12N0015-82 [I,A]
ECLA C12N015/82A4B

TR 200103311 IPCI C12N0015-82 [ICM,7]
IPCR C12N0015-82 [I,C*]; C12N0015-82 [I,A]
ECLA C12N015/82A4B

AU 772686 IPCI C12N0015-82 [ICM,7]
IPCR C12N0015-82 [I,C*]; C12N0015-82 [I,A]
ECLA C12N015/82A4B

CN 1234869 IPCI C12N0015-82 [I,A]; C12N0015-82 [I,C]
IPCR C12N0015-82 [I,C]; C12N0015-82 [I,A]
ECLA C12N015/82A4B

AT 365218 IPCI C12N0015-82 [I,C]; C12N0015-82 [I,A]
IPCR C12N0015-82 [I,C]; C12N0015-82 [I,A]
ECLA C12N015/82A4B

ES 2288478 IPCI C12N0015-82 [I,C]; C12N0015-82 [I,A]
IPCR C12N0015-82 [I,C]; C12N0015-82 [I,A]
ECLA C12N015/82A4B

US 6483013 IPCI C12N0015-84 [ICM,7]; C12N0005-04 [ICS,7]; A01H0001-00 [ICS,7]; A01H0005-00 [ICS,7]; A01H0005-10 [ICS,7]
IPCR C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]
NCL 800/294.000; 435/419.000; 435/427.000; 435/430.000;
435/430.100; 435/469.000; 800/260.000; 800/278.000;
800/314.000
ECLA C12N015/82A4B
MX 2001011871 IPCI C12N0015-82 [ICM,6]

ECLA C12N015/82A4B

ZA 2001009521 IPCI C12N [ICM,7]

ECLA C12N015/82A4B

IN 2001CN01741 IPCI C12N0015-82 [ICM, 7]

ABSTRACT:

This invention relates to improved methods for the production of transgenic cotton plants, comprising cocultivating *Agrobacterium* cells comprising a DNA fragment of interest operably linked to at least one T-DNA border with cotton embryogenic callus in the presence of a plant phenolic compound

SUPPL. TERM: *agrobacterium mediated transformation transgenic cotton prep*

INDEX TERM: *DNA*
 ROLE: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (T, linked to DNA fragments for transformation; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: *Embryo, plant*
 (callus of; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: *Plant tissue*
 (callus, embryogenic, of cotton; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: *Phenols, biological studies*
 ROLE: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (compound, for DNA transformation in plants; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: *Organ, plant*
 (hypocotyl, of a cotton seedling, embryogenic callus from; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: *DNA*
 ROLE: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (linked to T-DNA for transformation; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: *Agrobacterium*
Agrobacterium tumefaciens
 (mediated DNA transformation in plants; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: *Transformation, genetic*
 (mediated by *agrobacterium*; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: *Cotton (*Gossypium barbadense*)*
Plant (Embryophyta)
 (transgenic; improved method for *agrobacterium* mediated transformation of cotton)

INDEX TERM: 87-66-1, Pyrogallic acid 89-86-1, β -Resorcylic acid
 99-50-3, Protocatechuic acid 99-96-7, p-Hydroxybenzoic acid, biological studies 120-80-9, Catechol, biological studies 121-33-5, Vanillin 149-91-7, Gallic acid, biological studies 530-57-4, Syringic acid

530-59-6, Sinapinic acid 1135-24-6, Ferulic acid
 2478-38-8, Acetosyringone 90426-22-5,
 α -Hydroxy-acetosyringone
 ROLE: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (phenolic compound, for DNA transformation in plants; improved method for agrobacterium mediated transformation of cotton)

OS.CITING.REF.COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2003:396514

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):

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- (2) Chair, H; Kasetsart Journal Natural Sciences 1997, V31, P149
- (3) Firoozabady; Plant Molecular Biology 1987, V10, P105 ZCPLUS
- (4) Gelvin, S; US 4954442 A 1990 ZCPLUS
- (5) Halluin, K; WO 9837212 A 1998 ZCPLUS
- (6) Hoshino, Y; Plant Biotechnol (Tokyo) 1998, V15(1), P29 ZCPLUS
- (7) Maier, C; WO 9743430 A 1997 ZCPLUS
- (8) Phylogen; WO 8905344 A 1989 ZCPLUS
- (9) Veluthambi, K; Journal of Bacteriology 1989, V171(7), P3696 ZCPLUS

IT 149-91-7, Gallic acid, biological studies 530-57-4,

Syringic acid

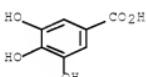
RL: AGR (Agricultural use); BUU (Biological use, unclassified);

BIOL (Biological study); USES (Uses)

(phenolic compound, for DNA transformation in plants; improved method for agrobacterium mediated transformation of cotton)

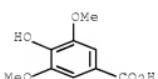
RN 149-91-7 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



10/810211

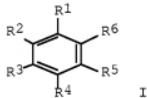
L92 ANSWER 18 OF 27 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:688013 ZCAPLUS Full-text
DOCUMENT NUMBER: 133:248394
ENTRY DATE: Entered STN: 29 Sep 2000
TITLE: Preparation of benzoate and benzyl derivatives insect
repellents for conifer sapling protection
INVENTOR(S): Nordlander, Goran; Nordenhem, Henrik; Borg-Karlsson,
Anna-karin; Unelius, Rikard
PATENT ASSIGNEE(S): Swed.
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A01N037-10
SECONDARY: A01N031-06; A01N043-30; A01N037-18
CLASSIFICATION: S-4 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056152	A1	20000928	WO 2000-SE580	20000323 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
SE 9901062	A	20000924	SE 1999-1062	19990323 <--
SE 515989	C2	20011105		
CA 2365998	A1	20000928	CA 2000-2365998	20000323 <--
EP 1162885	A1	20011219	EP 2000-921251	20000323 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
NO 2001004590	A	20011024	NO 2001-4590	20010921 <--
PRIORITY APPLN. INFO.:			SE 1999-1062	A 19990323 <--
			WO 2000-SE580	W 20000323 <--

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000056152	ICM	A01N037-10
	ICS	A01N031-06; A01N043-30; A01N037-18
	IPCI	A01N0037-10 [ICM,7]; A01N0031-06 [ICS,7]; A01N0031-00 [ICS,7,C*]; A01N0043-30 [ICS,7]; A01N0043-02 [ICS,7,C*]; A01N0037-18 [ICS,7]
	IPCR	A01N0031-00 [I,C*]; A01N0031-16 [I,A]; A01N0037-36 [I,C*]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0037-44 [I,C*]; A01N0037-48 [I,A]; A01N0043-02 [I,C*]; A01N0043-28 [I,A]
	ECLA	A01N031/16; A01N037/38; A01N037/40; A01N037/48; A01N043/28
SE 9901062	IPCI	A01N0037-10 [ICM,7]; A01N0031-06 [ICS,7]; A01N0031-00 [ICS,7,C*]; A01N0043-30 [ICS,7]; A01N0043-02 [ICS,7,C*]
	IPCR	A01N0031-00 [I,C*]; A01N0031-16 [I,A]; A01N0037-36 [I,C*]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0037-44 [I,C*]; A01N0037-48 [I,A]; A01N0043-02 [I,C*]; A01N0043-28 [I,A]

	ECLA	A01N031/16; A01N037/38; A01N037/40; A01N037/48; A01N043/28
CA 2365998	IPCI	A01N0037-10 [ICM,7]; A01N0031-06 [ICS,7]; A01N0031-00 [ICS,7,C*]; A01N0037-18 [ICS,7]; A01N0043-30 [ICS,7]; A01N0043-02 [ICS,7,C*]
	IPCR	A01N0031-00 [I,C*]; A01N0031-16 [I,A]; A01N0037-36 [I,C*]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0043-28 [I,A]
	ECLA	A01N031/16; A01N037/38; A01N037/40; A01N037/48; A01N043/28
EP 1162885	IPCI	A01N0037-10 [ICM,6]; A01N0031-06 [ICS,6]; A01N0031-00 [ICS,6,C*]; A01N0043-30 [ICS,6]; A01N0043-02 [ICS,6,C*]; A01N0037-18 [ICS,6]
	IPCR	A01N0031-00 [I,C*]; A01N0031-16 [I,A]; A01N0037-36 [I,C*]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0037-44 [I,C*]; A01N0037-48 [I,A]; A01N0043-02 [I,C*]; A01N0043-28 [I,A]
	ECLA	A01N031/16; A01N037/38; A01N037/40; A01N037/48; A01N043/28
NO 2001004590	IPCI	A01N0037-110 [ICM,7]
	IPCR	A01N0031-00 [I,C*]; A01N0031-16 [I,A]; A01N0037-36 [I,C*]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0037-44 [I,C*]; A01N0037-48 [I,A]; A01N0043-02 [I,C*]; A01N0043-28 [I,A]
	ECLA	A01N031/16; A01N037/38; A01N037/40; A01N037/48; A01N043/28
OTHER SOURCE(S):		
GRAPHIC IMAGE:	MARPAT 133:248394	

**ABSTRACT:**

The benzoate and benzyl derivs. I (R1, R2, R3, R4, R5 = H, OH, (un)substituted alkyl, alkoxy, etc.; R6 = (un)substituted alkyl, alkoxy, etc.) are prepared as insect repellents for protection of conifer sapling against pine weevils.

SUPPL. TERM:	insect repellent prepn conifer sapling pine weevil
INDEX TERM:	Insect repellents (for conifer sapling protection)
INDEX TERM:	Hylastes brunneus
	Hylastes cunicularius
	Hylobius abietis
	Hylobius congener
	Hylobius pales
	Hylobius pinastri
	Pachylobius picivorus (insect repellents for conifer sapling protection against)
INDEX TERM:	Conifer (sapling; insect repellents for protection of)

INDEX TERM:	93-07-2, 3,4-Dimethoxybenzoic acid 93-15-2, Methyleugenol 93-16-3, Methylisoeugenol 97-54-1, Isoeugenol 99-24-1, Methyl 3,4,5-trihydroxybenzoate 99-76-3, Methyl 4-hydroxybenzoate 119-36-8, Methyl 2-hydroxybenzoate 306-08-1, Homovanillic acid 645-08-9, 3-Hydroxy-4-methoxybenzoic acid 705-76-0, 3,5-Dimethoxybenzyl alcohol 877-22-5, 2-Hydroxy-3-methoxybenzoic acid 1916-07-0, Methyl 3,4,5-trimethoxybenzoate 2150-37-0, Methyl 3,5-dimethoxybenzoate 2150-38-1, Methyl 3,4-dimethoxybenzoate 2150-42-7, Methyl 2,3-dimethoxybenzoate 2150-43-8, Methyl 3,4-dihydroxybenzoate 2150-44-9, Methyl 3,5-dihydroxybenzoate 2150-47-2, Methyl 2,4-dihydroxybenzoate 2612-02-4, 2-Hydroxy-5-methoxybenzoic acid 2702-58-1, Methyl 3,5-dinitrobenzoate 2905-82-0, Methyl 2-hydroxy-5-methoxybenzoate 3943-74-6, Methyl 4-hydroxy-3-methoxybenzoate 4191-73-5, Isopropyl 4-hydroxybenzoate 4670-10-4, 3,5-Dimethoxyphenylacetic acid 4707-47-5, Methyl 2,4-dihydroxy-3,6-dimethylbenzoate 5446-02-6, Methyl 2-hydroxy-4-methoxybenzoate 6342-70-7, Methyl 2-hydroxy-3-methoxybenzoate 6702-50-7, Methyl 3-hydroxy-4-methoxybenzoate 37908-98-8, Methyl 3-chloro-4-methoxybenzoate 51329-15-8, Methyl 3,5-dibromobenzoate 62435-37-4 ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (insect repellent for conifer sapling protection)
INDEX TERM:	94-51-1, Piperonylic acid 97-53-0, Eugenol 530-57-4, 3,5-Dimethoxy-4-hydroxybenzoic acid 1132-21-4, 3,5-Dimethoxybenzoic acid ROLE: AGR (Agricultural use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses) (insect repellent for conifer sapling protection)
INDEX TERM:	884-35-5P, Methyl 4-hydroxy-3,5-dimethoxybenzoate 72782-63-9P 120301-09-9P, N-Ethyl 3,5-dimethoxybenzamide 295784-21-3P 295784-23-5P 295784-24-6P 295784-25-7P 295784-26-8P 295784-27-9P ROLE: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (insect repellent for conifer sapling protection)
INDEX TERM:	1135-23-5 ROLE: RCT (Reactant); RACT (Reactant or reagent) (insect repellent for conifer sapling protection)
INDEX TERM:	3929-47-3, 3-(3,4-Dimethoxyphenyl)-1-propanol ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (insect repellents for conifer sapling protection)
INDEX TERM:	326-56-7P, Methyl 3,4-methylenedioxymethoxybenzoate 2305-13-7P ROLE: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation as insect repellent for conifer sapling protection)
INDEX TERM:	67-56-1, Methanol, reactions 75-04-7, Ethylamine, reactions 75-08-1, Ethanethiol 75-89-8, 2,2,2-Trifluoroethanol 112-53-8, 1-Dodecanol 928-97-2 1849-29-2, Trideuteriomethanol 17213-57-9, 3,5-Dimethoxybenzoyl chloride

ROLE: RCT (Reactant); RACT (Reactant or reagent)
 (reactant in preparation of insect repellents for conifer
 sapling protection)

OS.CITING.REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2007:1138534; 2002:157486; 2002:10202; 2001:849597

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):

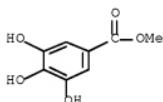
- (1) Anon; JP A56115206 1981
- (2) Borden; US 6051612 A 2000 ZCPLUS
- (3) Hayes; US 5518757 A 1996 ZCPLUS
- (4) Hayes; US 5695807 A 1997 ZCPLUS
- (5) Hayes, J; US 5403863 A 1995 ZCPLUS
- (6) Inazuka; US 4219570 A 1980 ZCPLUS
- (7) Maier-Bode, H; DE 696347 C 1940 ZCPLUS
- (8) Mattsson; SE 7709013 A 1979
- (9) Octrooibureau Kisch N V; WO 9853678 A2 1998 ZCPLUS

IT 99-24-1, Methyl 3,4,5-trihydroxybenzoate

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (insect repellent for conifer sapling protection)

RN 99-24-1 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy-, methyl ester (CA INDEX NAME)

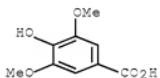


IT 530-57-4, 3,5-Dimethoxy-4-hydroxybenzoic acid

RL: AGR (Agricultural use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
 (insect repellent for conifer sapling protection)

RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)

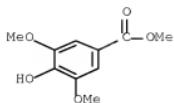


IT 884-35-5P, Methyl 4-hydroxy-3,5-dimethoxybenzoate

RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (insect repellent for conifer sapling protection)

RN 884-35-5 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy-, methyl ester (CA INDEX NAME)



L92 ANSWER 19 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2000:300759 ZCPLUS Full-text
 DOCUMENT NUMBER: 132:289952
 ENTRY DATE: Entered STN: 09 May 2000
 TITLE: Germination stimulants for *Plasmodiophora brassicae*
 and prevention of cruciferous vegetables from the
 fungal infection
 INVENTOR(S): Ohi, Michio; Hatake, Shuichi
 PATENT ASSIGNEE(S): Tama Biochemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 INT. PATENT CLASSIF.:
 MAIN: A01N031-16
 SECONDARY: A01N025-00; A01N037-38; A01N037-40; A01N043-08;
 A01N043-16; A01N065-00
 CLASSIFICATION: 5-2 (Agrochemical Bioregulators)
 Section cross-reference(s): 10
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

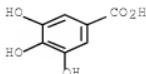
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000128708	A	20000509	JP 1998-298322	19981020 <--
PRIORITY APPLN. INFO.:			JP 1998-298322	19981020 <--
PATENT CLASSIFICATION CODES:				
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES				
JP 2000128708	ICM	A01N031-16		
	ICS	A01N025-00; A01N037-38; A01N037-40; A01N043-08; A01N043-16; A01N065-00		
	IPCI	A01N0031-16 [ICM,7]; A01N0025-00 [ICS,7]; A01N0037-38 [ICS,7]; A01N0037-40 [ICS,7]; A01N0043-08 [ICS,7]; A01N0043-16 [ICS,7]; A01N0065-00 [ICS,7]		
	IPCR	A01N0025-00 [I,C*]; A01N0025-00 [I,A]; A01N0031-00 [I,C*]; A01N0031-16 [I,A]; A01N0037-36 [I,C*]; A01N0037-38 [I,A]; A01N0037-40 [I,A]; A01N0043-02 [I,C*]; A01N0043-08 [I,A]; A01N0043-16 [I,A]; A01N0065-00 [I,C]; A01N0065-00 [I,A]; A01N0065-30 [I,C]; A01N0065-30 [I,A]		

ABSTRACT:
 The germination stimulators contain compds. having phenol or pyrone structure, e.g. caffeoic acid, tannic acid, corilagin, flavone, coumaric acid, etc., or materials containing the compds. Cruciferous vegetables are prevented from infection with the fungi by previously treating *P. brassicae* spores with the above compds. or materials in the absence of the plants. Germinated fungi can not grow because there is no Cruciferae root as hosts. A spore suspension

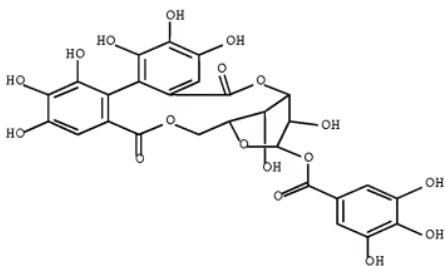
10/810211

of *P. brassicae* was incubated with caffeic acid at 25° for 7 days. The culture was added to soil and Chinese cabbage was cultivated on the soil for 35 days. No root knots were observed

SUPPL. TERM: Plasmodiophora germination stimulant phenol compd Cruciferae root knot prevention; Brassicaceae prevention root knot
INDEX TERM: Plasmodiophora germination stimulation caffeic acid Buckwheat (*Fagopyrum esculentum*)
(husk; prevention of cruciferous vegetables from root knot by previously treating Plasmodiophora brassicae spores with phenol or pyrone compds. in plant-free condition)
INDEX TERM: Phenols, biological studies
ROLE: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(polyphenols, nonpolymeric; prevention of cruciferous vegetables from root knot by previously treating Plasmodiophora brassicae spores with phenol or pyrone compds. in plant-free condition)
INDEX TERM: Chinese cabbage
Cruciferae (Brassicaceae)
Plasmodiophora brassicae
Spore germination
(prevention of cruciferous vegetables from root knot by previously treating Plasmodiophora brassicae spores with phenol or pyrone compds. in plant-free condition)
INDEX TERM: Phenols, biological studies
Tannins
ROLE: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(prevention of cruciferous vegetables from root knot by previously treating Plasmodiophora brassicae spores with phenol or pyrone compds. in plant-free condition)
INDEX TERM: 117-39-5, Quercetin 149-91-7, Gallic acid, biological studies 154-23-4, Catechol 331-39-5, Caffeic acid 500-05-0, Coumaric acid 525-82-6, Flavone 23094-69-1, Corilagin
ROLE: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(prevention of cruciferous vegetables from root knot by previously treating Plasmodiophora brassicae spores with phenol or pyrone compds. in plant-free condition)
IT 149-91-7, Gallic acid, biological studies 23094-69-1
, Corilagin
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(prevention of cruciferous vegetables from root knot by previously treating Plasmodiophora brassicae spores with phenol or pyrone compds. in plant-free condition)
RN 149-91-7 ZCAPLUS
CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



RN 23094-69-1 ZCPLUS

CN β -D-Glucopyranose, cyclic 3,6-[(1R)-4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate] 1-(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

L92 ANSWER 20 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:331243 ZCPLUS Full-text

DOCUMENT NUMBER: 130:348547

ENTRY DATE: Entered STN: 28 May 1999

TITLE: Biocidal compositions containing metal compounds, alkanolamines, and phenols or aromatic amines, and their use

INVENTOR(S): Aoki, Hiroshi; Tanaka, Kazumi; Echigo, Takashi

PATENT ASSIGNEE(S): Showa Denko K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.

DOCUMENT TYPE: CODEN: JKXXAF

LANGUAGE: Patent

INT. PATENT CLASSIF.: Japanese

MAIN: A01N033-08

SECONDARY: A01N031-16; A01N037-10; A01N037-12; A01N033-08; A01N059-16; A01N059-20; A01N059-06; A01N031-08; A01N033-06

CLASSIFICATION: 5-2 (Agrochemical Bioregulators)

Section cross-reference(s): 43, 57

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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10/810211

JP 11139905	A	19990525	JP 1997-308462	19971111 <--
PRIORITY APPLN. INFO.: JP 1997-308462 19971111 <--				
PATENT CLASSIFICATION CODES:				
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES				

JP 11139905	ICM	A01N033-08		
	ICS	A01N031-16; A01N037-10; A01N037-12; A01N033-08; A01N059-16; A01N059-20; A01N059-06; A01N031-08; A01N033-06		
	IPCI	A01N0033-08 [ICM,6]; A01N0031-16 [ICS,6]; A01N0037-10 [ICS,6]; A01N0037-12 [ICS,6]; A01N0033-08 [ICS,6]; A01N0059-16 [ICS,6]; A01N0059-20 [ICS,6]; A01N0059-06 [ICS,6]; A01N0031-08 [ICS,6]; A01N0033-06 [ICS,6]		
	IPCR	A01N0031-00 [I,C*]; A01N0031-16 [I,A]; A01N0033-00 [I,C*]; A01N0033-08 [I,A]; A01N0037-10 [I,A]; A01N0037-10 [I,C*]; A01N0037-12 [I,A]; A01N0037-12 [I,C*]		
ABSTRACT:				
Title compns., which are applied to objects (e.g. porous materials such as alloys, ceramics, woods, fibers, plastic foams, etc.) by coating and/or impregnation, contain metal compds., alkanolamines, and phenolic compds. and/or aromatic amines. Ethanolamine 1,2, pyrogallol 0.25, CuSO ₄ .5H ₂ O 2.5, and polyphenol oxidase (of <i>Myrothecium verrucaria</i> SD 3001) 0.004 g were dissolved into H ₂ O to give a biocide. A Japanese cedar test piece was soaked into the biocide, washed with H ₂ O, and inoculated with <i>Tyromyces palustris</i> to result in 1.6% weight loss, vs. 32.4%, for control.				
SUPPL. TERM:	biocide metal compd alkanolamine phenol; wood preservative copper sulfate ethanolamine pyrogallol; arom amine biocide metal compd alkanolamine; porous material biocide metal alkanolamine phenol			
INDEX TERM:	Alcohols, biological studies ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (amino; biocidal compns. containing metal compds., alkanolamines, and phenols or aromatic amines)			
INDEX TERM:	Amines, biological studies ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (aromatic; biocidal compns. containing metal compds., alkanolamines, and phenols or aromatic amines)			
INDEX TERM:	Wood (bamboo; biocidal compns. containing metal compds., alkanolamines, and phenols or aromatic amines for)			
INDEX TERM:	Biocides Termiticides			
INDEX TERM:	Wood preservatives (biocidal compns. containing metal compds., alkanolamines, and phenols or aromatic amines)			
INDEX TERM:	Phenols, biological studies Tannins ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (biocidal compns. containing metal compds., alkanolamines, and phenols or aromatic amines)			
INDEX TERM:	Bricks Ceramics Concrete Porous materials Rush			

INDEX TERM: Straw
 Wood
 (biocidal compns. containing metal compds.,
 alkanolamines, and phenols or aromatic amines for)

INDEX TERM: Alloys, miscellaneous
 Charcoal
 Fibers
 Plastic foams
 ROLE: MSC (Miscellaneous)
 (biocidal compns. containing metal compds.,
 alkanolamines, and phenols or aromatic amines for)

INDEX TERM: Wood
 (flour; biocidal compns. containing metal compds.,
 alkanolamines, and phenols or aromatic amines for)

INDEX TERM: Oxidation catalysts
 (for polyphenols; biocidal compns. containing metal
 compds., alkanolamines, and phenols or aromatic amines)

INDEX TERM: Rice (*Oryza sativa*)
 (hulls; biocidal compns. containing metal compds.,
 alkanolamines, and phenols or aromatic amines for)

INDEX TERM: 7439-92-1D, Lead, compds., biological studies 7439-95-4D,
 Magnesium, compds., biological studies 7439-96-5D,
 Manganese, compds., biological studies 7439-98-7D,
 Molybdenum, compds., biological studies 7440-02-0D,
 Nickel, compds., biological studies 7440-05-3D, Palladium,
 compds., biological studies 7440-22-4D, Silver, compds.,
 biological studies 7440-24-6D, Strontium, compds.,
 biological studies 7440-31-5D, Tin, compds., biological
 studies 7440-32-6D, Titanium, compds., biological studies
 7440-36-0D, Antimony, compds., biological studies
 7440-39-3D, Barium, compds., biological studies
 7440-43-9D, Cadmium, compds., biological studies
 7440-47-3D, Chromium, compds., biological studies
 7440-48-4D, Cobalt, compds., biological studies
 7440-62-2D, Vanadium, compds., biological studies
 7440-67-7D, Zirconium, compds., biological studies
 7440-70-2D, Calcium, compds., biological studies
 7446-70-0, Aluminum chloride, biological studies
 7646-85-7, Zinc chloride, biological studies 7720-78-7,
 Iron(II) sulfate 7758-98-7, Copper(II) sulfate, biological
 studies 20427-59-2, Copper(II) hydroxide 36386-77-3,
 Copper(II) carbonate
 ROLE: BAC (Biological activity or effector, except adverse);
 BSU (Biological study, unclassified); BUU (Biological use,
 unclassified); BIOL (Biological study); USES (Uses)
 (biocidal compns. containing metal compds.,
 alkanolamines, and phenols or aromatic amines)

INDEX TERM: 87-66-1, Pyrogallol 102-71-6, Triethanolamine, biological
 studies 111-42-2, biological studies 120-80-9,
 1,2-Benzenediol, biological studies 123-31-9,
 1,4-Benzenediol, biological studies 141-43-5, biological
 studies 149-91-7, Gallic acid, biological
 studies 8062-15-5, Ligninsulfonic acid 9005-53-2,
 Lignin, biological studies
 ROLE: BUU (Biological use, unclassified); BIOL (Biological
 study); USES (Uses)
 (biocidal compns. containing metal compds.,
 alkanolamines, and phenols or aromatic amines)

INDEX TERM: 9002-10-2, Catechol oxidase 9003-99-0, Peroxidase
 9029-44-1, Ascorbate oxidase 80498-15-3, Laccase

80619-01-8, Bilirubin oxidase
 ROLE: CAT (Catalyst use); USES (Uses)
 (polyphenol oxidation catalyst; biocidal compns.
 containing metal compds., alkanolamines, and phenols or

aromatic

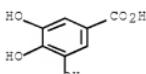
amines)

IT 149-91-7, Gallic acid, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (biocidal compns. containing metal compds., alkanolamines, and
 phenols or aromatic amines)

RN 149-91-7 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



L92 ANSWER 21 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1998:605018 ZCPLUS Full-text
 DOCUMENT NUMBER: 129:198884
 ORIGINAL REFERENCE NO.: 129:40295a,40298a
 ENTRY DATE: Entered STN: 24 Sep 1998
 TITLE: Increasing the efficiency of integrative
 transformation of monocotyledonous plants by
 stimulation of cell division
 INVENTOR(S): D'Halluin, Kathleen
 PATENT ASSIGNEE(S): Plant Genetic Systems, N.V., Belg.
 SOURCE: PCT Int. Appl., 43 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 INT. PATENT CLASSIF.:
 MAIN: C12N015-82
 SECONDARY: C12N005-04
 CLASSIFICATION: 3-2 (Biochemical Genetics)
 Section cross-reference(s): 11
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9837212	A1	19980827	WO 1998-IB220	19980220 <--
W: AI, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
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AU 9860027	A	19980909	AU 1998-60027	19980220 <--
AU 727570	B2	20001214		

10/810211

EP 900279	A1	19990310	EP 1998-903214	19980220 <--
EP 900279	B1	20040929		
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CN 1222939	A	19990714	CN 1998-800476	19980220 <--
CN 1155715	C	20040630		
BR 9805900	A	19990824	BR 1998-5900	19980220 <--
JP 2000509612	T	20000802	JP 1998-536435	19980220 <--
JP 4199312	B2	20081217		
US 6140553	A	20001031	US 1998-26673	19980220 <--
AT 278026	T	20041015	AT 1998-903214	19980220 <--
ES 2229472	T3	20050416	ES 1998-903214	19980220 <--
US 6372963	B1	20020416	US 2000-480142	20000110 <--
PRIORITY APPLN. INFO.:				
US 1997-135507P P 19970220 <--				
US 1997-808988 A 19970220 <--				
EP 1990-403332 A 19901123 <--				
US 1998-26673 A3 19980220 <--				
WO 1998-IB220 W 19980220 <--				

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
WO 9837212	ICM	C12N015-82		
	ICS	C12N005-04		
	IPCI	C12N0015-82 [ICM,6]; C12N0005-04 [ICS,6]		
	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]		
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CA 2252612	IPCI	C12N0015-82 [ICM,6]; C12N0005-04 [ICS,6]		
	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]		
	ECLA	C12N015/82A; C12N015/82A4B		
AU 9860027	IPCI	C12N0015-82 [ICM,6]; C12N0005-04 [ICS,6]		
	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]		
	ECLA	C12N015/82A; C12N015/82A4B		
EP 900279	IPCI	C12N0015-82 [ICM,6]; C12N0005-04 [ICS,6]		
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	ECLA	C12N015/82A; C12N015/82A4B		
CN 1222939	IPCI	C12N0015-82 [ICM,6]; C12N0005-04 [ICS,7]; C12N0015-82 [ICS,7]		
	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]		
	ECLA	C12N015/82A; C12N015/82A4B		
BR 9805900	IPCI	C12N0015-82 [ICM,6]; C12N0005-04 [ICS,6]		

	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]
	ECLA	C12N015/82A; C12N015/82A4B
JP 2000509612	IPCI	A01H0005-00 [I,A]; C12N0015-09 [N,A]; C12N0005-10 [N,A]; C12N0001-21 [N,A]
	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]; A01H0005-00 [I,C]; A01H0005-00 [I,A]; C12N0001-21 [N,C]; C12N0001-21 [N,A]
US 6140553	ECLA	C12N015/82A; C12N015/82A4B
	IPCI	C12N0015-00 [ICM]; C12N0015-29 [ICS]; C12N0015-82 [ICS]; A01H0004-00 [ICS]
	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]
	NCL	800/278.000; 435/320.100; 435/419.000; 435/468.000; 536/023.600; 536/023.700; 536/024.100; 800/295.000; 800/298.000
	ECLA	C12N015/82A; C12N015/82A4B
AT 278026	IPCI	C12N0015-82 [ICM,7]; C12N0005-04 [ICS,7]
	ECLA	C12N015/82A; C12N015/82A4B
ES 2229472	IPCI	C12N0015-82 [ICM,7]; C12N0005-04 [ICS,7]
	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]
	ECLA	C12N015/82A; C12N015/82A4B
US 6372963	IPCI	C12N0005-04 [ICM]; C12N0005-10 [ICS]; C12N0015-84 [ICS]; A01H0001-00 [ICS]
	IPCR	C12N0015-09 [I,C*]; C12N0015-09 [I,A]; A01H0001-00 [I,C*]; A01H0001-00 [I,A]; C12N0005-10 [I,C*]; C12N0005-10 [I,A]; C12N0015-29 [I,C*]; C12N0015-29 [I,A]; C12N0015-82 [I,C*]; C12N0015-82 [I,A]; C12N0015-84 [I,C*]; C12N0015-84 [I,A]
	NCL	800/294.000; 435/419.000; 435/420.000; 435/469.000; 800/298.000
	ECLA	C12N015/82A; C12N015/82A4B

ABSTRACT:

A method for increasing the efficiency of integrative transformation of monocotyledonous plants, especially cereals, by stimulation of cell division with plant phenolic compds. immediately prior to transformation is described. After stimulation of cell division, transformation can be by standard phys. or biol. methods. Preferred phenolic compds. include α -hydroxy-acetosyringone, syringic acid, ferulic acid, vanillin and related compds. Type I corn callus was transformed using Agrobacterium. Pretreatment of callus with 100-200 μ M acetosyringone for 5 days followed by transformation in the presence of 100-200 μ M acetosyringone led to transformation rates of 0.3-0.9% vs. <0.1% for control cells. Presence of a functional virB11 gene on the transforming plasmid increased the efficiency of transformation.

SUPPL. TERM: monocot transformation cell division phenols; catechol

INDEX TERM: monocot transformation cell division

DNA

ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(T; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: Plant tissue

(callus, transformation of; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: Cell division

Monocotyledon (Liliopsida)

Transformation, genetic

(increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: DNA sequences

(of T-DNA; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: Plasmid vectors

(PGSV71, for transformation of monocots; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: Plasmid vectors

(PTCO114, for transformation of monocots; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: Plasmid vectors

(PTCO121, for transformation of monocots; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: Plasmid vectors

(pVE200, for transformation of monocots; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: Plant tissue culture

(stimulation of cell division in; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: Flavanols

Phenols, biological studies

ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(stimulation of plant cell division by; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

INDEX TERM: *Agrobacterium tumefaciens*

(transformation of monocots using; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

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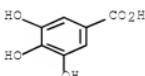
INDEX TERM: Barley
Corn
Rice (*Oryza sativa*)
Wheat
(transformation of; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)
INDEX TERM: Gene, microbial
ROLE: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(virB11, in T-DNA-mediated transformation; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)
INDEX TERM: 212194-19-9, DNA (plasmid pGVS71 T-DNA plus flanks)
212194-20-2 212194-21-3, DNA (plasmid pGVS8 T-DNA plus flanks)
ROLE: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(nucleotide sequence; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)
INDEX TERM: 87-66-1D, Pyrogallic acid, mixts. containing 89-86-1D, β -Resorcylic acid, mixts. containing 99-50-3D, Protocatechuic acid, mixts. containing 99-96-7D, mixts. containing
120-80-9D, Catechol, mixts. containing 121-33-5D, Vanillin, mixts. containing 149-91-7D, Gallic acid, mixts. containing 530-57-4D, Syringic acid, mixts. containing 530-59-6D, Sinapinic acid, mixts. containing 1135-24-6D, Ferulic acid, mixts. containing 2478-38-8D, Acetosyringone, mixts. containing 90426-22-5D, α -Hydroxy-acetosyringone, mixts. containing
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(stimulation of plant cell division with; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009
OS.CITING.REFS: CAPLUS 2002:793742; 2002:390488; 2000:842294; 2000:260560
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD.
REFERENCE(S):
(1) Biocen Knittel Nathalie; WO 9506741 A 1995 ZCAPLUS
(2) Bolton, G; SCIENCE 1986, V232, P983 ZCAPLUS
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(6) Gelvin, S; US 4954442 A 1990 ZCAPLUS
(7) Goldman, S; US 5177010 A 1993 ZCAPLUS
(8) Guivarc'H, A; PROTOPLASMA 1993, V174, P10 ZCAPLUS
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(10) Ohio State Res Found; WO 9732016 A 1997 ZCAPLUS
IT 149-91-7D, Gallic acid, mixts. containing 530-57-4D,
Syringic acid, mixts. containing
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

10/810211

study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(stimulation of plant cell division with; increasing efficiency of integrative transformation of monocotyledonous plants by stimulation of cell division)

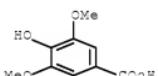
RN 149-91-7 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 22 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:457015 ZCPLUS [Full-text](#)

DOCUMENT NUMBER: 129:212936

ORIGINAL REFERENCE NO.: 129:43171a,43174a

ENTRY DATE: Entered STN: 23 Jul 1998

TITLE: Field efficacy of *Verticillium lecanii*, sex pheromone, and pheromone analogs as potential management agents for soybean cyst nematode

AUTHOR(S): Meyer, S. L. F.; Johnson, G.; Dimock, M.; Fahey, J. W.; Huettel, R. N.

CORPORATE SOURCE: USDA ARS, Nematology Laboratory, Beltsville, MD, 20705-2350, USA

SOURCE: Journal of Nematology (1997), 29(3), 282-288
CODEN: JONEB5; ISSN: 0022-300X

PUBLISHER: Society of Nematologists

DOCUMENT TYPE: Journal

LANGUAGE: English

CLASSIFICATION: 5-4 (Agrochemical Bioregulators)

ABSTRACT:

A soybean cyst nematode sex pheromone (vanillic acid), chemical analogs of the pheromone, and the fungus *Verticillium lecanii* were applied in alginate prills (340 kg/ha) to microplots and small-scale field plots as potential management agents for *H. glycines* on soybean. In 1991 microplot tests, treatment with *V. lecanii*, vanillic acid, syringic acid plus *V. lecanii*, or vanillic acid plus *V. lecanii* lowered mid-season cyst nos., compared with the untreated susceptible cultivar control, autoclaved *V. lecanii* treatment, or aldicarb treatment. At-harvest cyst nos. were lowest with *V. lecanii* and with vanillic acid treatments. Aldicarb treatment reduced mid-season cyst nos. in 1992. There were no differences among seed yields either year. In the field

trials, nos. of cysts were reduced one or both years with aldicarb, ferulic acid, syringic acid, vanillic acid, or 4-hydroxy-3-methoxybenzonitrile treatments, or with a resistant cultivar, compared to an untreated susceptible cultivar. Highest yields were recorded after treatment with 4-hydroxy-3-methoxybenzonitrile (1991), Me vanillate (1992), and aldicarb (1992). These studies indicate that some chemical analogs of vanillic acid have potential for use in soybean cyst nematode management schemes.

SUPPL. TERM: nematocide *Verticillium* intergrated pest control *Heterodera*
 INDEX TERM: Nematicides
Verticillium lecanii
 (control of soybean cyst nematode by)
 INDEX TERM: *Heterodera glycines*
 Integrated pest control
 (efficacy of *Verticillium lecanii*, sex pheromone, and
 pheromone analogs for soybean cyst nematode
 control)
 INDEX TERM: 116-06-3, Aldicarb 121-34-6, (Vanillic acid)
 530-57-4, Syringic acid 1135-24-6, Ferulic acid
 4421-08-3, 4-Hydroxy-3-methoxybenzonitrile
 ROLE: AGR (Agricultural use); BIOL (Biological
 study); USES (Uses)
 (control of soybean cyst nematode by)
 OS.CITING.REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7
 CITINGS)
 DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009
 OS.CITING.REFS: CAPLUS 2008:788138; 2006:399634; 2005:977838; 2003:669097;
 2001:376639; 2000:492865; 1998:785095
 REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS
 RECORD.
 REFERENCE(S):
 (1) Carris, L; Bulletin 786 1989
 (2) Chen, S; Journal of Nematology 1994, V26, P296 MEDLINE
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 V26, P592 MEDLINE
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 V27, P602 MEDLINE
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 (19) Meyer, S; Journal of Nematology 1996, V28, P36 ZCPLUS
 (20) Meyer, S; Journal of the Helminthological Society of
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- (28) Wrather, J; Plant Disease 1997, V81, P107

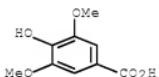
IT 530-57-4, Syringic acid

RL: AGR (Agricultural use); BIOL (Biological study); USES
(Uses)

(control of soybean cyst nematode by)

RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 23 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1998:347521 ZCPLUS Full-text
 DOCUMENT NUMBER: 129:105492
 ORIGINAL REFERENCE NO.: 129:21589a,21592a
 ENTRY DATE: Entered STN: 10 Jun 1998
 TITLE: Application of a sex pheromone, pheromone analogs, and Verticillium lecanii for management of Heterodera glycines
 AUTHOR(S): Meyer, S. L. F.; Huettel, R. N.
 CORPORATE SOURCE: USDA ARS, Nematology Laboratory, Beltsville, MD, 20705-2350, USA
 SOURCE: Journal of Nematology (1996), 28(1), 36-42
 CODEN: JONESB5; ISSN: 0022-300X
 PUBLISHER: Society of Nematologists
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 CLASSIFICATION: 5-4 (Agrochemical Bioregulators)
 ABSTRACT:
 A mutant strain of the fungus *Verticillium lecanii* and selected bioregulators of *Heterodera glycines* were evaluated for their potential to reduce population densities of the nematode on soybean under greenhouse conditions. The bioregulators tested were the *H. glycines* sex pheromone vanillic acid and the pheromone analogs syringic acid, isovanillic acid, ferulic acid, 4-hydroxy-3-methoxybenzonitrile, and Me vanillate. A *V. lecanii*-vanillic acid combination and a *V. lecanii*-syringic acid combination were also applied as treatments. Syringic acid, 4-hydroxy-3-methoxybenzonitrile, *V. lecanii*, *V. lecanii*-vanillic acid, and *V. lecanii*-syringic acid significantly reduced nematode population densities in the greenhouse tests. Results with vanillic acid, isovanillic acid, and ferulic acid treatments were variable. Me vanillate did not significantly reduce cyst nematode population densities.

SUPPL. TERM: sex pheromone *Verticillium* *Heterodera* nematocide soybean
 INDEX TERM: Nematicides
 (bio-; use of a sex pheromone, pheromone analogs, and

INDEX TERM: *Verticillium lecanii for management of Heterodera glycines on soybean)*

INDEX TERM: *Pheromones, animal*

ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(sex; use of a sex pheromone, pheromone analogs, and *Verticillium lecanii for management of Heterodera glycines on soybean)*

INDEX TERM: *Heterodera glycines*

Soybean (Glycine max)

INDEX TERM: *Verticillium lecanii*

(use of a sex pheromone, pheromone analogs, and *Verticillium lecanii for management of Heterodera glycines on soybean)*

INDEX TERM: 121-34-6, Vanillic acid 530-57-4, Syringic acid 645-08-9, Isovanillic acid 1135-24-6, Ferulic acid 4421-08-3, 4-Hydroxy-3-methoxybenzonitrile

ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(use of a sex pheromone, pheromone analogs, and *Verticillium lecanii for management of Heterodera glycines on soybean)*

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2001:376639; 1998:785095; 1998:457015; 1998:433815

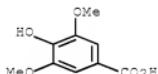
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):

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- (15) Jaffe, H; *Journal of Chemical Ecology* 1989, V15, P2031 ZCAPLUS
- (16) Meyer, S; *Journal of Nematology* 1990, V22, P532 MEDLINE
- (17) Meyer, S; *Journal of Nematology* 1995, V27, P409 MEDLINE
- (18) Meyer, S; *Journal of the Helminthological Society of Washington* 1992, V59, P237
- (19) Meyer, S; *Nematologica*, in press 1996, V41
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 (23) Uma, N; Transactions of the British Mycological Society 1987, V88, P335

IT 530-57-4, Syringic acid
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (use of a sex pheromone, pheromone analogs, and Verticillium lecanii for management of Heterodera glycines on soybean)
 RN 530-57-4 ZCPLUS
 CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



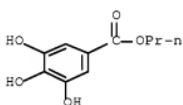
L92 ANSWER 24 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1983:571245 ZCPLUS Full-text
 DOCUMENT NUMBER: 99:171245
 ORIGINAL REFERENCE NO.: 99:26211a,26214a
 ENTRY DATE: Entered STN: 12 May 1984
 TITLE: Interactions of the herbicides EPTC and EPTC + R-25788 with ozone and antioxidants in corn
 AUTHOR(S): Hatzios, Kriton K.
 CORPORATE SOURCE: Dep. Plant Pathol. Physiol., Virginia Polytechnic Inst. and State Univ., Blacksburg, VA, 24061, USA
 SOURCE: Journal of Agricultural and Food Chemistry (1983), 31(6), 1187-91
 CODEN: JAFCAU; ISSN: 0021-8561
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 CLASSIFICATION: 5-3 (Agrochemical Bioregulators)

ABSTRACT:
 In greenhouse studies, the potential interactions of the herbicide EPTC (S-Et dipropylthiocarbamate) [759-94-4] with ozone [10028-15-6] or the antioxidants piperonyl butoxide [51-03-6] and propyl gallate [121-79-9] on corn (*Zea mays* Pioneer 3780) were investigated in the presence or absence of the herbicide antidote R25788 (N,N-diallyl-2,2-dichloroacetamide) [37764-25-3]. Com. formulations of EPTC (EPTAM) or EPTC plus R-25788 (ERADICANE) were incorporated into the soil at 4.5, 5.6, and 6.7 kg/ha, and they were evaluated against 0.2 and 0.3 ppm of O3 or against 4.5, 6.7, and 9.0 kg/ha of soil applications of the 2 antioxidants. The interactive effects between selected treatment combinations of EPTC plus R25788 and O3 or the 2 antioxidants were highly synergistic. In the absence of R25788, the interactive effects of EPTC with O3 or the 2 antioxidants were additive, although EPTC at 6.7 kg/ha combined with some rates of piperonyl butoxide interacted synergistically. The implications of these findings as to the potential mode of action of the antidote R-25788 are discussed.

SUPPL. TERM: EPTC herbicide antidote ozone antioxidant
 INDEX TERM: 37764-25-3
 ROLE: BIOL (Biological study)
 (EPTC interaction with ozone or antioxidants in corn

10/810211

INDEX TERM: response to)
548-37-8
ROLE: BIOL (Biological study)
(EPTC interaction with ozone or antioxidants in,
herbicide antidote effect on)
INDEX TERM: 51-03-6 121-79-9 10028-15-6, biological
studies
ROLE: BIOL (Biological study)
(EPTC interaction with, in corn, herbicide
antidote effect on)
INDEX TERM: 759-94-4
ROLE: BIOL (Biological study)
(ozone and antioxidants interaction with, in corn,
herbicide antidote effect on)
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2
CITINGS)
DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009
OS.CITING.REFS: CAPLUS 2002:241741; 1997:376246
IT 121-79-9
RL: BIOL (Biological study)
(EPTC interaction with, in corn, herbicide antidote effect
on)
RN 121-79-9 ZCAPLUS
CN Benzoic acid, 3,4,5-trihydroxy-, propyl ester (CA INDEX NAME)



L92 ANSWER 25 OF 27 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1983:174745 ZCAPLUS Full-text
DOCUMENT NUMBER: 98:174745
ORIGINAL REFERENCE NO.: 98:26481a,26484a
ENTRY DATE: Entered STN: 12 May 1984
TITLE: Effects of CGA-43089 on responses of sorghum (Sorghum
bicolor) to metolachlor combined with ozone or
antioxidants
AUTHOR(S): Hatzios, Kriton K.
CORPORATE SOURCE: Dep. Plant Pathol., Virginia Polytech. Inst. and State
Univ., Blacksburg, VA, 24061, USA
SOURCE: Weed Science (1983), 31(2), 280-4
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 5-3 (Agrochemical Bioregulators)
GRAPHIC IMAGE:

**ABSTRACT:**

In greenhouse studies, the potential interactive effects of metolachlor (I) [51218-45-2] treatments combined with the air pollutant O₃ or the antioxidants piperonyl butoxide [51-03-6] and propyl gallate [121-79-9], on the growth of sorghum (*S. bicolor*, Funk G522DR) seedlings that were protected or unprotected with the antidote CGA-43089 (II) [63278-33-1] were examined. I was applied preplant incorporated at rates of 2.2, 3.9, and 5.6 kg/ha, and it was evaluated against fumigation with O₃ at 0.2 and 0.3 ppm (volume) or against 4.9, 6.7, and 9.0 kg/ha of each antioxidant applied preplant incorporated. In combination treatments, shoot dry weight at 30 days after planting was reduced more than expected by I in the presence of the protectant II and O₃ or some rates of the 2 antioxidants, suggesting synergism. In the absence of II, growth responses of sorghum to combination treatments of I with O₃ or Pr gallate suggested an additive effect, although some treatments of I combined with piperonyl butoxide interacted synergistically.

SUPPL. TERM: sorghum CGA43089 metolachlor ozone antioxidant; piperonyl butoxide metolachlor sorghum CGA43089; propyl gallate metolachlor sorghum CGA43089

INDEX TERM: Sorghum
(metolachlor combined with antioxidants or ozone effect on, CGA43089 interaction in)

INDEX TERM: 51218-45-2

ROLE: BIOL (Biological study)
(sorghum response to antioxidants or ozone and, CGA43089 effect on)

INDEX TERM: 51-03-6 121-79-9 10028-15-6, biological studies

ROLE: BIOL (Biological study)
(sorghum response to metolachlor and, CGA43089 effect on)

INDEX TERM: 63278-33-1

ROLE: BIOL (Biological study)
(sorghum response to metolachlor combined with antioxidants or ozone interaction with)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

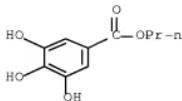
DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2002:241741; 1999:765978; 1997:376246

IT 121-79-9
RL: BIOL (Biological study)
(sorghum response to metolachlor and, CGA43089 effect on)

RN 121-79-9 ZCAPLUS

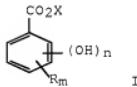
CN Benzoic acid, 3,4,5-trihydroxy-, propyl ester (CA INDEX NAME)



L92 ANSWER 26 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1983:121373 ZCPLUS Full-text
 DOCUMENT NUMBER: 98:121373
 ORIGINAL REFERENCE NO.: 98:18425a,18428a
 ENTRY DATE: Entered STN: 12 May 1984
 TITLE: Plant growth regulators containing benzoates
 PATENT ASSIGNEE(S): Chugai Pharmaceutical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 INT. PATENT CLASSIF.: A01N037-10
 CLASSIFICATION: 5-3 (Agrochemical Bioregulators)
 Section cross-reference(s): 11
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57212105	A	19821227	JP 1981-95938	19810623 <--
PRIORITY APPLN. INFO.:			JP 1981-95938	19810623 <--
PATENT CLASSIFICATION CODES:				
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
JP 57212105	IC	A01N037-10		
	IPCI	A01N0037-10		
	IPCR	A01N0037-36 [I,C*]; A01N0037-40 [I,A]; A01N0037-10 [I,C*]; A01N0037-10 [I,A]		

GRAPHIC IMAGE:



ABSTRACT:

Plant growth regulators contain I (X = H, metal, or alkyl; R = H, alkyl, or alkoxy; n = 1-3; m = 1-4), except 3,4,5-trihydroxybenzoic acid. Thus, an emulsion contains o-hydroxybenzoic acid (69-72-7) 40, clay 40, and talc 50 parts. The potentiation of cucumber growth was demonstrated by 20 ppm o-hydroxybenzoic acid.

10/810211

SUPPL. TERM: plant growth regulator benzoate
INDEX TERM: Plant hormones and regulators
ROLE: BIOL (Biological study)
(hydroxybenzoates)
INDEX TERM: 69-72-7, biological studies 69-72-7D, derivs. 89-86-1
99-06-9, biological studies 99-10-5 99-24-1
99-50-3 99-96-7, biological studies 118-61-6 119-36-8
121-79-9 303-07-1 303-38-8 490-79-9 499-76-3
530-57-4 578-36-9 2150-46-1 33580-60-8
ROLE: AGR (Agricultural use); BAC (Biological
activity or effector, except adverse); BSU (Biological
study, unclassified); BIOL (Biological study); USES (Uses)
(plant growth regulator)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

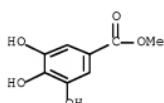
DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2001:283/21; 1999:40117

IT 99-24-1 121-79-9 530-57-4
RL: AGR (Agricultural use); BAC (Biological activity or
effector, except adverse); BSU (Biological study, unclassified); BIOL
(Biological study); USES (Uses)
(plant growth regulator)

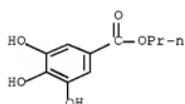
RN 99-24-1 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy-, methyl ester (CA INDEX NAME)



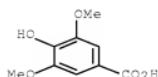
RN 121-79-9 ZCPLUS

CN Benzoic acid, 3,4,5-trihydroxy-, propyl ester (CA INDEX NAME)



RN 530-57-4 ZCPLUS

CN Benzoic acid, 4-hydroxy-3,5-dimethoxy- (CA INDEX NAME)



L92 ANSWER 27 OF 27 ZCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1947:19501 ZCPLUS Full-text
DOCUMENT NUMBER: 41:19501
ORIGINAL REFERENCE NO.: 41:3902d-i,3903a-i,3904a-i,3905a-i,3906a-i,3907a-i,3908a-i,3909a-i,3910a-i,3911a-i,3912a-h
ENTRY DATE: Entered STN: 22 Apr 2001
TITLE: New growth-regulating compounds. I. Summary of growth-inhibitory activities of some organic compounds as determined by three tests
AUTHOR(S): Thompson, H. E.; Swanson, Carl P.; Norman, A. G.
CORPORATE SOURCE: Camp Detrick, Frederick, MD
SOURCE: Botanical Gazette (Chicago) (1946), 107, 476-507
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
CLASSIFICATION: 15A (Economic Poisons)
ABSTRACT:
cf. Newman, et al. C.A. 41, 3774i. Growth-regulating substances were prepared and subjected to 3 tests. In each a common reference material, (2,4-dichlorophenoxy)acetic acid (I), was employed and the results of any test were expressed as a percentage of the inhibition produced concurrently by I. The primary test, Test A (Corn Germination Test), involved the determination of inhibition of elongation of the primary root of germinating corn. Corn grains were germinated at 27° in Petri dishes containing 20 mL of an aqueous solution of the compound to be tested at a concentration of 10 p.p.m. After 4 days of growth the length of the primary root of each plant was measured. Inhibition of growth was determined by subtracting the average length of the primary roots of the treated seeds from that of the control seeds, expressed in percentage. In Test B (Kidney-Bean Single-Droplet Water Test) kidney beans were placed in pots containing 1 lb. soil. After 7-10 days each plant was treated with 0.02 mL of an aqueous solution containing 200 p.p.m. (4 %) of the compound to be tested and 0.5% of Carbowax 1500. Treatment was applied to the upper surface of one of the primary leaves at a point along the midrib approx. one-eighth in. from the point of attachment of the blade and petiole. On the 10th day after treatment the fresh weight of that portion of each plant above the second node was determined. Controls untreated and also treated with I were included in each test. Test C (Kidney-Bean Single-Droplet Oil Test) was essentially the same as Test B but 0.01 mL of solution was applied containing 5% of the compound to be tested. Tri-Bu phosphate, at a concentration of 0.2%, was used as a co-solvent for compds. not directly soluble or miscible with oil. The introduction of I could be accomplished only in this way. Close numerical agreement was not necessarily expected between the 3 tests. The degree of inhibition produced by I in Tests B and C at different times of the year was not wholly identical and was affected by rate of growth. Test A was the most reproducible and formed the primary basis for detection of inhibitory activity and was reliable in separating those compds. that possess a high inhibitory activity for most broad-leaved plants from those with little or no activity at the same concentration. Satisfactory agreement was found between Tests A and B with discrepancies in the direction of a lower activity by Test B. Variation between replications was greatest in Test C but the results were satisfactory in separating active inhibitors from those with low activity. Compds. showing high activity are promising for use as

herbicides. The compds. tested have been classified into groups according to activity and the results under 3 tests reported. The following, as Group I, are compds. possessing 80% or more of the activity of I in Test A:

(2-bromo-4-chlorophenoxy)acetic acid; Bu (2,4,5-trichlorophenoxy) acetate; (2-chloro-4-bromophenoxy)acetic acid; NH4 4-chlorocinnamate;

α -(4-chlorophenoxy)acetamide; (3-chlorophenoxy)acetic acid; 4-isomer;

α -(2,4-dichlorophenoxy)acetamide;

2-(2,4-dichlorophenoxyacetamido)-1-butanol; Na

4-(2,4-dichlorophenoxyacetamido)-2,5-dichlorobenzenesulfonate;

2-(2,4-dichlorophenoxyacetamido)-2-ethyl-1,3-propanediol;

2-(2,4-dichlorophenoxyacetamido)-2-methyl-1,3-propanediol;

2-(2,4-dichlorophenoxyacetamido)-1-naphthalenesulfonic acid;

8-(2,4-dichlorophenoxyacetamido)-1-naphthalenesulfonic acid;

8-(2,4-dichlorophenoxyacetamido)-1-naphthol-3,6-disulfonic acid;

(3,4-dichlorophenoxy)acetic acid; 2,5-isomer; (2,4-dichlorophenoxy)acetic anhydride; α -(2,4-dichlorophenoxy)-4-sulfoacetanilide;

(2,4-dichlorophenoxy)acetohydroxamic acid; (2,4-dichlorophenoxy) acetyl chloride; (2,4-dichlorophenoxyacetamido)guanidine;

N-(2,4-dichlorophenoxyacetyl)urea; α -(2,4-dichlorophenoxy)butyric acid;

2-diethylaminoethyl (2,4-dichlorophenoxy)acetate; 2-diethylaminoethyl (2,4,5-trichlorophenoxy)acetate; 2,2-dimethyl-1,3-dioxolan-4-ylmethyl (2-methyl-4-chlorophenoxy)acetate; 1,4-bis(2,4,5-trichlorophenoxyacetamido)benzene; 1,3-isomer; Et (2,4-dichlorophenoxy)-acetate; Et (2-methyl-4-chlorophenoxy) acetate; Et 2-(2-methyl-4-chlorophenoxy) heptanoate; 2-hydroxyethyl (2,4-dichlorophenoxy)acetate; (2-iodo-4-chlorophenoxy)acetic acid;

(2-methyl-4-bromophenoxy)acetic acid; (2-methyl-4-chlorophenoxy)acetamide;

N-methyl- α -(4-chlorophenoxy)acetamide;

4-(2-methyl-4-chlorophenoxyacetamido)benzenesulfonic acid;

2-(2-methyl-4-chlorophenoxyacetamido)-6-8-naphthalenedisulfonic acid;

2-(2-methyl-4-chlorophenoxyacetamido)-1-naphthalenesulfonic acid;

8-(2-methyl-4-chlorophenoxyacetamido)-1-naphthalenesulfonic acid;

7-(2-methyl-4-chlorophenoxyacetamido)-1-naphthol-3,6-disulfonic acid;

(2-methyl-4-chlorophenoxy)acetic acid; (2-methyl-6-chlorophenoxy)acetic acid;

(2-methyl-4-chlorophenoxy)acetic anhydride; (2-methyl-4-chlorophenoxy)acetyl chloride; (2-methyl-4-fluorophenoxy)acetic acid;

N-methyl- α -(2,4,5-trichlorophenoxy)acetamide; 2-nitro-2-methylpropyl (2,4-dichlorophenoxy)acetate; 2-nitro-2-methylpropyl (2-methyl-4-chlorophenoxy)acetate; Ph chloroacetate; Ph (2-methyl-4-chlorophenoxy)acetate; iso-Pr (2-methyl-4-chlorophenoxy)acetate;

2-(2,4,5-trichlorophenoxyacetamido)-2-(hydroxymethyl)-1,3-propanediol;

α -(2,4,5-trichlorophenoxy)-N,N-bis(2-hydroxyethyl)acetamide;

(2,4,5-trichlorophenoxy)acetic piperide;

α -(2,4,5-trichlorophenoxy)-3-chloroacetanilide;

α -(2,4,5-trichlorophenoxy)-2,4-dimethylacetanilide;

α -(2,4,5-trichlorophenoxy)-4-ethoxyacetanilide;

α -(2,4,5-trichlorophenoxy)-4-methylacetanilide;

α -(2,4,5-trichlorophenoxy)-2,4,6-trichloroacetanilide;

[3-(trifluoromethyl)phenoxy] acetic acid;

N-[tris(hydroxymethyl)methyl]-N-(2-hydroxy-3-[tris(hydroxymethyl)methylamino]-propyl)- α -(2,4-dichlorophenoxy)acetamide-HCl. The following, as Group II, are compds. possessing 50-79% of the activity of I in Test A:

2-aminoethanol bis-[(4-chlorophenoxy)acetate]; (4-bromophenoxy)acetic acid;

0-(2-carboxymethoxy-3-methyl-5-bromobenzoyl)-glycolic acid;

0-(2-carboxymethoxy-3-methyl-5-nitrobenzoyl)-glycolic acid; decyl dihydrogen orthophosphate; (2-chloro-4-tert-butylphenoxy)acetic acid;

(2-chloro-4-iodophenoxy)acetic acid; 1-chloronaphthylacetic acid (mixture),

ammonium salt; 2-(4-chlorophenoxyacetamido)-1-naphthalenesulfonic acid;
 4-(4-chlorophenoxyacetamido)-1-naphthalenesulfonic acid;
 8-(4-chlorophenoxyacetamido)-1-naphthalenesulfonic acid;
 8-(4-chlorophenoxyacetamido)-1-naphthol-3,6-disulfonic acid;
 α -(4-chlorophenoxy)-N,N-bis(2-hydroxyethyl)acetamide;
 (4-chlorophenoxy)acetyl chloride; 2-(4-chlorophenoxyacetamido)-2-(hydroxymethyl)-1,3-propanediol; γ -(4-chlorophenoxy)-butyric acid;
 S-(4-chlorophenyl)thioglycolic acid; 2-butenyl (4-chlorophenoxy)acetate;
 (2,4-dibromophenoxy)acetic acid; α,β -dibromo- γ -phenylpropionyl
 chloride; 3,5-dichloro-2-bromobenzoic acid; (2,4-dichloro-5-bromophenoxy)acetic
 acid; (2,4-dichlorophenoxy)acetic piperidide;
 4-(2,4-dichlorophenoxyacetamido)-1-naphthalenesulfonic acid;
 (2,4-dichlorophenoxy)acetonitrile; N'-(2,4-dichlorophenoxyacetyl)betaine
 hydrazide hydrochloride; α -(2,4-dichlorophenoxy)-N,N-diethylacetamide;
 α -(2,4-dichlorophenoxy-N-methylacetamide; NH4
 γ -(2,4-dichlorophenoxy)butyrate; 2,4-dichlorophenylglycine;
 S-(2,5-dichlorophenyl)thioglycolyl chloride;
 2,2-dimethyl-1,3-dioxolan-4-ylmethyl (4-chlorophenoxy)-acetate;
 β -(2,4-dimethylphenoxy)propionic acid; 3,5-dimethylpyrazole; Et
 3-hydroxy-2-naphthoate; Et (2-methyl-4,6-dichlorophenoxy) acetate;
 2-hydroxy-3-methyl-5-bromobenzoic acid; 2-hydroxy-3-methyl-5-iodobenzoic acid;
 2-hydroxyethyl (4-chlorophenoxy)-acetate;
 N-2-hydroxyethyl- α -(2,4-dichlorophenoxy)acetamide;
 N-2-hydroxyethyl- α -(2-methyl-4-chlorophenoxy)-acetamide; 2-hydroxyethyl
 (2-methyl-4-chlorophenoxy)-acetate; 2-hydroxy-3-methylbenzoic acid;
 2-hydroxy-5-nitrobenzoic acid; (2-methyl-4-bromo-6-carboxyphenoxy)acetic acid;
 α -(3-methyl-4-chlorophenoxy)acetamide; Me (4-chlorophenoxy)acetate;
 (2-methyl-5-chlorophenoxy)acetic acid; (3-methyl-4-chlorophenoxy)-acetic acid;
 α -(2-methyl-4-chlorophenoxy)-N,N-bis(2-hydroxyethyl)acetamide;
 (3-methyl-4-chlorophenoxy)-acetyl chloride; Me (2,4-dibromophenoxy)acetate; Me
 (2,4-dimethylphenoxy) acetate; (2-methylphenoxy)acetyl chloride; Ph
 (4-chlorophenoxy)acetate; Ph (2,4-dichlorophenoxy)acetate;
 α -(2-propyl-4-chlorophenoxy)acetamide; α -(2,4,5-trichlorophenoxy)
 acetonilide; (2,4,5-trichlorophenoxy)acetonitrile;
 N-(2,4,5-trichlorophenoxyacetyl) bis[tris(hydroxymethyl) methylaminomethyl]
 carbinol hydrochloride. The following, as Group III, are compds. possessing
 30-49% of the activity of I in Test A: 4-aminoazobenzene; 2-(amylamino)ethyl
 diphenylacetate-HCl; (2-amyl-4-chlorophenoxy)acetic acid; isoamyl
 (2,4-dimethylphenoxy)acetate; 2-bromoethyl (4-chlorophenoxy)acetate;
 (2-bromophenyl)sulfamic acid; butylamine mercuric chloride; Bu
 (3-methylphenoxy)acetate; cacothecline; 1-(4-carboxyphenyl-3-(3-
 chlorophenyl)urea; chloroacetamide; 4-chlorobenzoyl chloride;
 (4-chlorophenoxy)acetonitrile; 1-(4-chlorophenoxy)-2,3-epoxypropane;
 (4-chlorophenyl)acetic acid; N-(4-chlorophenyl)glycine;
 S-(4-chlorophenyl)thioglycolyl chloride;
 N-butyl-S-(4-chlorophenyl)thioglycolamide; [2-(cyanomethyl)-4-chlorophenoxy]
 acetic acid; NH4 N,N-(cyclopentamethylene)dithiocarbamate;
 3,5-dibromo-2-aminobenzoic acid; 2,5-dichloroaniline mercuric chloride salt;
 (2,4-dichloro-5-aminophenoxy)-acetic acid; 2,4-dichlorocinnamic acid;
 α -(2,4-dichloro-6-methylphenoxy) acetamide;
 (2,4-dichloro-5-nitrophenoxy)acetic acid;
 (2,4-dichlorophenoxy)-N,N-bis(2-hydroxyethyl)acetamide;
 S-(2,5-dichlorophenyl)thioglycolic acid;
 1,1-bis(1-hydroxy-2,2,2-trichloroethyl)urea; 3,4-dimethylphenol;
 (2,4-dimethylphenoxy)acetic acid; 3,4-isomer; (2,4-dimethylphenoxy)acetyl
 chloride; S-(2,4-dinitrophenyl)thioglycolic acid; N,N-bis
 [tris(hydroxymethyl)methyl]ethylenediamine-di-HCl; Et
 [2-(chloromethyl)-4-chlorophenoxy]acetate; (2-ethyl-4-chlorophenoxy)acetic

acid; Et S-(4-chlorophenyl)thioglycolate; 2-hydroxy-3-carboxy-5-chlorotoluene; 4-hydroxy-3,5-dibromobenzoic acid; 2-hydroxyethyl 2,4-dichlorophenyl ether; N4-(iodoacetyl)sulfanilamide; 2-methyl-2-butyaminopropyl 4-(hexyloxy)benzoate-HCl; (2-methyl-4-chloro-6-carboxyphenoxy)acetic acid; Me (2-chlorophenoxy)acetate; 1-(2-methyl-4-chlorophenoxy)-2,3-epoxyp propane; Me (2,4-dichlorophenoxy)acetate; (2-methylphenoxy)acetic acid; 4-nitrobenzoyl chloride; octyl dihydrogen orthophosphate; 2-isopropylaminoethyl 2-butoxybenzoate-HCl; Pr (2-methyl-4-chlorophenoxy)acetate; iso-Pr phenylcarbamate; Ba 3-pyridinesulfonate; sulfamerazine; 2,3,5-tribromobenzoic acid; 2,3,5-trichlorobenzoic acid; (2,2,2-trichloro-1-hydroxyethyl)urea; (2,4,6-trichlorophenoxy)acetic acid; (2,4,5-trichlorophenoxy)-2-nitroacetanilide; 2,4,6-trichlorophenyl phenylcarbamate; S-(2,4,5-trichlorophenyl)thioglycolamide; 1-[3-(trifluoromethyl)phenoxy]-2,3-epoxyp propane; NH4 2,3,5-triiodobenzoate; N-[tris(hydroxymethyl)methyl]-N-(2-hydroxy-3-[tris(hydroxymethyl)methylamino]propyl)- α -(4-chlorophenoxy)acetamide-HCl.

The following, as Group IV-A, are compds. showing less than 29% of the activity of I in Test A and 50% or more of the activity of I in either Test B or Test C: α -amino- β -(2,4-dichlorophenoxy)propionamide; α -amino- β -(3-nitro-4-hydroxyphenyl)propionic acid nitrate salt; aminetetrazole; aniline; (benzylsulfonyl)acetic acid; 5-bromo-2-nitrobenzoic acid; 2-bromo-3-nitrobenzoic acid; NH4 2-bromo-3-nitrobenzoate; β -bromopropionic acid; 2-butyaminooethyl 4-butoxybenzoate-HCl; 2-isobutyaminooethyl 4-butoxybenzoate-HCl; 2-butyaminooethyl 4-ethoxybenzoate-HCl; 2-butyaminooethyl 4-methoxybenzoate-HCl; camphor oxime; N4-(carbo-2-chloroethoxy)sulfanilamide; (2-carbomethoxy-4-chlorophenoxy)acetic acid; (2-carboxy-4-chlorophenoxy)acetic acid; (2-carboxy-6-methylphenoxy)acetic acid; (2-carboxyphenoxy)acetic acid; [2-(carboxymethoxy)-3,5-dichlorobenzoyl]glycolic acid; chloroacetic acid; 2-chloroaniline; 3-chloroaniline; 4-chloroaniline; 4-chlorobenzyl mercaptan; 4-chlorobenzenesulfonyl chloride; 4-chlorobenzylisothiourea-HCl; 4-chloromandelic acid; (2-chloro-4-methylphenoxy)acetic acid; 2-chloro-3-nitrobenzoic acid; 2-chloro-5-nitrobenzoic acid; (2-chlorophenoxy)acetic acid; [2-(2-chlorophenyl)phenoxy]acetic acid; 4-chlorophenol; diazaminobenzene; 2,4-dibromophenol; dichloroacetic acid; 2,4-dichloroaniline; 2,5-dichloroaniline; (2,4-dichlorobenzylsulfonyl)acetic acid; 2,4-dichlorobenzoic acid; 2,4-dichlorobenzyl isothiourea-HCl; (2,4-dichloro-6-carboxyphenoxy)acetic acid; (2,6-dichloro-4-nitrophenoxy)acetic acid; 2,4-dichlorophenyl phenylcarbamate; (2,5-dichlorophenyl)sulfamic acid; 2,4-dihydroxypyrimidine; 2,4-dimethylphenol; (2,4-dinitrophenyl)acetic acid; N,N'-bis[tris(hydroxymethyl)methyl] hexamethylenediamine-di-HCl; 3-ethoxy-2-naphthoic acid; 2-ethylaminobutyl 4-ethoxybenzoate-HCl; Et carbamate; Et β -methyl- β -(4-chlorophenyl)glycidate; 3-ethyl-4-methylpyridine; Et (2-propyl-4-chlorophenoxy)acetate; (2-fluorophenoxy)acetic acid; 2-hydroxy-3-bromo-5-chlorobenzoic acid; 2-hydroxy-3-methyl-5-nitrobenzoic acid; N-(2-hydroxy-3-chloropropyl)-p-toluidine; 2-hydroxy-3,5-dinitrobenzoic acid; 4-iodobenzoic acid; 2-methoxyphenol; 4-methoxyphenol; 2-methyl-2-amylaminopropyl diphenylacetate-HCl; 2-methyl-5-chlorophenol; 2-methyl-6-chlorophenol; (2-methyl-4-chlorophenoxy)fumaric acid; Me 3-chlorophenylcarbamate; 2-methyl-4,6-dichlorophenol; 2-methyl-2-hexylaminopropyl 4-ethoxybenzoate-HCl; Me (2-methyl-6-chlorophenoxy)acetate; (4-methylphenoxy)acetic acid; Me phenylthiocarbamate; S-(2-methylphenyl)thioglycolic acid; 4-methyl-4-(trichloromethyl)-2,5-cyclohexadien-1-one O-carboxymethyloxime; 2-nitrobutyl phenylcarbamate; 1-phenyl-3-methyl-5-pyrazole; phthalic acid; α -pinene; 2-isopropylaminooethyl 4-butoxybenzoate-HCl; (2-propyl-4-chlorophenoxy)acetic acid; iso-Pr (2,4-dimethylphenoxy)acetate; iso-Pr (2-methyl-6-chlorophenoxy)acetate; 3-propyl-2-naphthoic acid; iso-Pr

(2-propyl-4-chlorophenoxyacetate); trichloroacetamide; trichloroacetic acid; trichloroacetyl chloride; 2,4,5-trichlorobenzenesulfonamide; 3,4,5-trihydroxybenzoic acid; N-[tris(hydroxymethyl)methyl]-2,3-dibromopropylamine-HBr; salicylic acid. The following, as Group IV-B, are compds. insufficiently soluble in water for Test A to be performed but exhibiting 50% or more of the activity of I in either Test B or Test C: allyl (4-chlorophenoxy)acetate; allyl (2,4-dichlorophenoxy)acetate; 2-aminonaphthoic acid; amyl (2,4-dichlorophenoxy)acetate; isoamyl (2,4-dichlorophenoxy)acetate; amyl 1-naphthalene carbamate; bis-(4-chlorophenyl)(trichloromethyl)methane; 1,1'-(bis-2-naphthol)phenylmethane; 2-bromo-3,5-dichlorobenzamide; 2-bromo-3,5-dichlorobenzanilide; 2,2'-dibromo-3,5-dichlorobenzanilide; 2,3'-dibromo-3,5-dichlorobenzanilide; 2,4'-dibromo-3,5-dichlorobenzanilide; 2-bromo-3,3',5-trichlorobenzanilide; 2-bromo-2',3,4',5-tetrachlorobenzanilide; 2-bromo-3,5-dichloro-m-benzotoluidide; 2-bromo-3,5-dichlorobenzoyl chloride; 2-bromoethyl (2,4-dibromophenoxy) acetate; 2-bromoethyl (2,4-dichlorophenoxy) acetate; α -(4-bromophenoxy)acetamide; 1-(3-bromophenyl)-3-(2-chlorophenyl)urea; 1-(3-bromophenyl)-3-(3-chlorophenyl)urea; Bu (2,4-dichlorophenoxy)acetate; iso-Bu (2,4-dichlorophenoxy)acetate; 1-carbethoxy-3-(3-chlorophenyl)urea; 2-chloroethyl (4-chlorophenoxy)acetate; 2-chloroethyl (2,4-dichlorophenoxy)acetate; 2-chloroethyl (2-methyl-4-chlorophenoxy)acetate; 2-chloroethyl 1-naphthalene carbamate; 2-chloroethyl phenylcarbamate; α -(4-chlorophenoxy)-p-acetaniside; α -(4-chlorophenoxy)-2-bromoacetanilide; α -(4-chlorophenoxy)-3-bromoacetanilide; α -(4-chlorophenoxy)-4-bromoacetanilide; α -(4-chlorophenoxy)-2-chloroacetanilide; α -(4-chlorophenoxy)-3-chloroacetanilide; α -(4-chlorophenoxy)-2,4-dimethylacetanilide; α -(4-chlorophenoxy)-4-ethoxyacetanilide; 1-(4-chlorophenoxyacetyl)-2-phenylhydrazine; α -(4-chlorophenoxy)-4-iodoacetanilide; α -(4-chlorophenoxy)-3-nitroacetanilide; α -(4-chlorophenoxy)-p-acetotoluidide; α -(4-chlorophenoxy)-N-p-xylenacetamide; γ -(4-chlorophenoxy)butyronitrile; 4-chlorophenyl (4-chlorophenoxy)acetate; 1-(4-chlorophenyl)-3-(2-chlorophenyl) urea; 4-chlorophenyl (2,4-dichlorophenoxy)acetate; 1-(3-chlorophenyl)-3,3-(cyclopentamethylene)urea; 1-(3-chlorophenyl)-3-phenylurea; S-(4-chlorophenyl)-2-bromothioglycolanilide; S-(4-chlorophenyl)-3-bromothioglycolanilide; 4-chlorophenyl (2,4,5-trichlorophenoxy)acetate; 2,6-dibromobenzoquinone-4-chloroimide; 2,4-dichlorobenzylsulfonyl chloride; 1,3-bis(4-chlorophenoxyacetamido)benzene; 1,4-isomer; 4,4'-bis(4-chlorophenoxyacetamido)biphenyl; 2,4-bis(4-chlorophenoxyacetamido)toluene; α -(2,4-dichlorophenoxy)acetanilide; α -(2,4-dichlorophenoxy)-N-(2-aminoethyl)acetamide; α -(2,4-dichlorophenoxy)-p-acetaniside; α -(2,4-dichlorophenoxy)-2,5-dichloroacetanilide; α -(2,4-dichlorophenoxy)-2,4-dimethylacetanilide; 1-(2,4-dichlorophenoxyacetyl)-2-(2,4-dinitrophenyl)hydrazine; (2,4-dichlorophenoxy)acetic hydrazide; α -(2,4-dichlorophenoxy)aceto-2-naphthalide; α -(2,4-dichlorophenoxy)-p-acetotoluidide; α -(2,4-dichlorophenoxy)-N-o-xylenacetamide; 4-(2,4-dichlorophenoxyacetamido)azobenzene; (2,4-dichlorophenoxy)acetylaminoguanidine; (2,4-dichlorophenoxy)acetyl bromide;

α -(2,4-dichlorophenoxy)-N-(hydroxy-tert-butyl)acetamide;
 S-(2,4-dichlorophenoxyacetyl)isothiourea;
 1-(2,4-dichlorophenoxyacetyl)-2-methyl-2-thioisourea;
 γ -(2,4-dichlorophenoxy)butyric acid;
 γ -(2,4-dichlorophenoxy)butyronitrile; 2,4-dichlorophenyl (4-chlorophenoxy)acetate; 2,4-dichlorophenyl (2,4-dichlorophenoxy)acetate; 1-(2,5-dichlorophenyl)-3-phenylurea; S-(2,5-dichlorophenyl)thioglycolamide; 4,4'-bis(2,4-dichlorophenoxyacetamido)biphenyl; 1,4-bis(2,4-dimethylphenoxyacetamido)benzene; 2,4-bis(2,4-dimethylphenoxyacetamido)toluene; 2,4-dichlorophenyl (2,4,5-trichlorophenoxy)acetate; 2,4-dichlorophenyl (4-chlorophenoxy)acetate; 2,3-dichloropropyl (2,4-dibromophenoxy)acetate; 2,3-dichloropropyl (2,4-dichlorophenoxy)acetate; 2-diethylaminooethyl 2,3,5-triiodobenzoate; 3,3'-dimethyl-4,4'-bis(4-chlorophenoxyacetamido)biphenyl; 3,3'-dimethyl-4,4'-bis(2-methylphenoxyacetamido)biphenyl; 1,3-bis(2-methylphenoxyacetamido)benzene; 1,4-isomer; 4,4'-bis(2-methylphenoxyacetamido)biphenyl; 4,4'-bis(2,4-dimethylphenoxyacetamido)biphenyl; 1-(4-ethoxyphenyl)-3-phenylurea; Et 2-bromo-3,5-dichlorobenzoate; Et (4-bromophenoxy)acetate; Et (4-chlorophenoxy)acetate; 2-ethylhexyl (2,4-dichlorophenoxy)acetate; methallyl (4-chlorophenoxy)acetate; 2-methoxy-4-methylphenyl 1-naphthalenecarbamate; Me 2-bromo-3-nitrobenzoate; 4-(2-methyl-4-chlorophenoxyacetamido)azobenzene;
 α -(2-methyl-6-chlorophenoxy)-2,5-dichloroacetanilide;
 2-methyl-4-chlorophenyl (2,4-dichlorophenoxy)acetate;
 1-methyl-2,4-bis(2,4-dichlorophenoxyacetamido)benzene; Me 4-nitrophenylcarbamate; Me (2,4,5-trichlorophenoxy)acetate; (2-hydroxy-1-naphthyl)-1-piperidylmethane; 2-nitrobutyl (2,4,5-trichlorophenoxy)acetate; 4-nitro-N,N-dimethylaniline; octyl (2,4-dichlorophenoxy)acetate; pentachlorophenyl (2,4,5-trichlorophenoxy)acetate; 1-phenyl-3,3-cyclopentamethyleneurea; Ph phenylcarbamate; Ph (2,4,5-trichlorophenoxy)acetate; iso-Pr (2,4-dichlorophenoxy)acetate; 3-isopropoxy-2-naphthoic acid; 1,3-di-m-tolyl-urea; (2,4,5-tribromo-3,5-dimethylphenoxy)acetic acid; 2,4,6-tribromophenyl acetate; 2,4,5-trichlorobenzamide; trichloroethyl (2,4-dibromophenoxy)acetate; 2,2,2-trichloroethyl (2,4-dichlorophenoxy)acetate; 2,4,5-trichlorophenoxyacetic acid; 2-(2,4,5-trichlorophenoxyacetamido)anthraquinone;
 α -(2,4,5-trichlorophenoxy)-4-bromoacetanilide;
 α -(2,4,5-trichlorophenoxy)-4-methoxyacetanilide;
 (2,4,5-trichlorophenoxy)aceto-2-naphthalide;
 α -(2,4,6-trichlorophenoxy)-4-sulfoacetanaphthalide;
 α -(2,4,5-trichlorophenoxy)-m-acetotoluidide;
 (2,4,5-trichlorophenoxy)acetyl chloride;
 1-(2,4,5-trichlorophenoxyacetyl)-2-(p-nitrophenyl)hydrazine;
 2,4,6-trichlorophenyl (4-chlorophenoxy)acetate; 2,4,6-trichlorophenyl (2,4-dichlorophenoxy)acetate; 2,4,6-trichlorophenyl (2,4,5-trichlorophenoxy)acetate; N-[3-(trifluoromethyl)phenyl]- α -(4-chlorophenoxy)acetamide; N-[3-(trifluoromethyl)phenyl]- α -(2,4,5-trichlorophenoxy)acetamide; 2,3,5-triiodobenzoic acid; 2,3,5-triiodobenzoyl chloride; 1-[tris(hydroxymethyl)methylaminol]-2,4-dinitrobenzene; N-(p-xenyl)- α -(2,4-dichlorophenoxy)acetamide.

The following, as Group IV-C, were also examined by the three tests and showed relatively low activity as compared with I: 2-acetoxyethyl 1-naphthalenecarbamate; 2-acetoxyethyl phenylcarbamate; (2-acetyl-4-chlorophenoxy)acetic acid; (2-allyl-4-chlorophenoxy)acetic acid; allyl 1-naphthalenecarbamate; allyl phenylcarbamate; allyl 4-tolyl sulfone; 1-aminoanthraquinone; 2-isomer; 4-aminobenzyl

tris(hydroxymethyl)methylamine-di-HCl; 2-amino-3,5-dichlorobenzoic acid;
 2-aminoethylsulfuric acid; 8-amino-1-naphthol-3,6-disulfonic acid;
 1-amino-2-naphthol-4-sulfonic acid; 4-aminophenol; (2-aminophenoxy)acetic acid;
 (4-aminophenyl)acetic acid; 2-aminopyridine; 2-aminothiazole; 2-aminolinoethyl
 4-butoxybenzoate-HCl; isoamyl formate; amyl (2-methylphenoxy)acetate; isoamyl
 1-naphthalene carbamate; 4-tert-aminophenol; amyl phenylcarbamate; isoamyl
 phenylcarbamate; (4-arsonophenoxy)acetic acid; benzoic acid;
 4-benzylaminophenol-HCl; benzyl Bu sulfone; allyl (benzylsulfonyl)acetate; Me
 (benzylsulfonyl)acetate; N-benzyl-N,N'-bis[tris(hydroxymethyl)methyl]-2-hydroxy-
 1,3-diaminopropane; benzyl Et sulfone; benzyl Me sulfone; benzyl 4-tolyl
 sulfone; benzyl[tris(hydroxymethyl)methyl]amine; 1,3-bis{
 [tris(hydroxymethyl)methyl]amino}-2-propanol-HCl; 2-bromobenzamide;
 2-bromobenzanilide; 2-bromo-2',4'-dichlorobenzanilide; 2-bromobenzoic acid;
 3-isomer; NH4 4-bromobenzoate; 4-bromobenzonitrile;
 (2-bromo-4-tert-butylphenoxy)acetic acid;
 2-bromo-3,5-dichloro-N-butylbenzamide; 2-bromo-3,4',5-trichlorobenzanilide;
 2-bromoethylamine; 2-bromoethyl 4-ethoxythiobenzoate; 2-bromoethyl
 (2-methyl-4-chlorophenoxy)acetate; 2-bromo-4-nitrobenzoic acid;
 2-bromo-5-nitrobenzoic acid; NH4 2-bromo-5-nitrobenzoic acid;
 3-bromo-4-nitrobenzoic acid; 3-bromo-5-nitrobenzoic acid; 4-bromophenol;
 (2-bromophenoxy)acetic acid; α -(4-bromophenoxy)-4-bromoacetanilide;
 α -(4-bromophenoxy)-4-chloroacetanilide;
 α -(4-bromophenoxy)-2,5-dichloroacetanilide; 3-bromophenylammonium
 fluoroborate; 4-bromophenylammonium fluoroborate;
 1-(2-bromophenyl)-3-(2-chlorophenyl)urea;
 1-(4-bromophenyl)-3-(3-chlorophenyl)urea;
 1-(2-bromophenyl)-3-(3-chlorophenyl)urea;
 N-(4-bromophenyl)-3-(2-chlorophenyl)urea; NH4 (4-bromophenyl)dithiocarbamate;
 4-bromophenyl 1-naphthalene carbamate; (2-bromo-4-phenylphenoxy)acetic acid;
 4-bromophenyl phenylcarbamate; 1-(2-bromophenyl)-3-phenylurea;
 1-(3-bromophenyl)-3-phenylurea; 1-(4-bromophenyl)-3-phenylurea;
 3-bromophenylsulfamic acid; N-(3-bromophenyl)
 α , α -trichloroacetamide; 2-butylaminoethyl
 2-butoxybenzoate-HCl; 2-butylaminoethyl diphenylacetate-HCl; 2-butylaminoethyl
 4-(heptyloxy)benzoate-HCl; 2-butylaminoethyl 4-propoxybenzoate-HCl;
 2-butylaminoethyl 2-(thiobutoxy)benzoate; (2-sec-butyl-4-chlorophenoxy)acetic
 acid; Hg butylidithiocarbamate; Bu 1-naphthalene carbamate; iso-Bu
 1-naphthalene carbamate; 4-tert-butylphenol; Bu phenylcarbamate; iso-Bu
 phenylcarbamate; tert-Bu phenylcarbamate; 1-butyl-3-phenylthiourea;
 N-butyl- α -(2,4,5-trichlorophenoxy)acetamide;
 4-carbethoxy-6-methoxyquinoline; 1-carbethoxy-3-phenylurea; 1-carbobutoxyethyl
 1-naphthalene carbamate; 1-carboisopropoxyethyl 1-naphthalene carbamate;
 O-(2-carboxymethoxybenzoyl)glycolic acid;
 O-(2-carboxymethoxy-3-5-chlorobenzoyl)glycolic acid; NH4
 (carboxymethyl)dithiocarbamate; Na (4-carboxymethylphenyl)dithiocarbamate;
 2-carboxy-6-methylphenyl phenylcarbamate; NH4 (4-carboxyphenyl)dithiocarbamate;
 4-carboxyphenylglycine; o-carboxyphenyl 1-naphthalene carbamate;
 1-(4-carboxyphenyl)-3-(1-naphthyl)urea; 4-carboxyphenyl phenylcarbamate;
 S-(4-carboxyphenyl)thioglycolic acid; N4-(β -carboxypropionyl)sulfanilamide;
 pyrocatechol; chloroacetyl chloride; 4-chloroanisole; 2-chlorobenzaldehyde
 O-carboxymethyloxime; 2-chlorobenzaldehyde oxime; 4-chlorobenzamide;
 4-chlorobenzenesulfonamide; 4-chlorobenzoic acid; bis(4-chlorobenzyl)disulfide;
 S-(4-chlorobenzyl)thioglycolic acid; bis(4-chlorobenzyl)sulfide;
 (4-chlorobenzylsulfonyl)acetic acid; 4-chlorocinnamic acid; highly chlorinated
 1,5-dihydroxynaphthalene; 2-chloroethyl (2-propyl-4-chlorophenoxy)acetate;
 chlorohydroquinone; chlorohydroquinone-O,O-diacetic acid;
 4-(chloromercuri)phenol; [4-(chloromercuri)phenoxy]acetic acid;
 [2-(chloromethyl)-4-chlorophenoxy]acetic acid;
 2-chloro-4-methyl-6-methoxyquinoline; 2-chloro-4-methylquinoline;

(7-chloro-1-naphthoxy)acetic acid; 1-chloronaphthylacetic acid mixture; 4-chlorophenetole; 1-(4-chlorophenoxyacetamido)naphthalene; 2-(4-chlorophenoxyacetamido)naphthalene; α -(4-chlorophenoxy)-2,5-dichloroacetanilide; α -(4-chlorophenoxy)-N,N-diethyl-acetamide; (4-chlorophenoxy)acetic piperide; α -(4-chlorophenoxy)-2-nitroacetanilide; α -(4-chlorophenoxy)-2,4,6-trichloroacetanilide; (4-chlorophenoxy)(4-chlorophenyl)acetic acid; (4-chlorophenoxy)fumaric acid; 2-(4-chlorophenoxy)heptanoic acid; β -(4-chlorophenoxy)propionic acid; β -(4-chlorophenoxy)propionitrile; 4-chlorophenylammonium fluoroborate; 1-(2-chlorophenyl)-3-butylurea; 1-(3-chlorophenyl)-3-butylurea; 1-(2-chlorophenyl)-1-(4-carboxyphenyl)urea; N-(3-chlorophenyl)- α -chloroacetanide; 4-isomer; 1-(3-chlorophenyl)-3-(2-chlorophenyl) urea; 1-(4-chlorophenyl)-3-(3-chlorophenyl) urea; 3-(2-chlorophenyl)-1,1-cyclopentamethyleneurea; NH4 (4-chlorophenyl)dithiocarbamate; 2-chloro-1,4-phenylene bis(phenylcarbamate); N-(2-chlorophenyl)glycine; 1-(2-chlorophenyl)-3-(2-hydroxyethyl) urea; 3-chloro isomer; 3-chlorophenyl isocyanate; 1-(2-chlorophenyl)-3-(1-naphthyl) urea; 4-isomer; [2-(4-chlorophenyl)phenoxy]acetic acid; 1-(2-chlorophenyl)-3-phenylurea; 4-chloro isomer; 1-(2-chlorophenyl)-3-phenylthiourea; 3-isomer; 4-isomer; Na (3-chlorophenyl)sulfamate; (4-chlorophenyl)sulfamic acid; S-(2-chlorophenyl)thioglycolic acid; S-(4-chlorophenyl)thioglycolamide; S-(4-chlorophenyl)thioglycolanilide; S-(4-chlorophenyl)-4'-bromothioglycolanilide; S-(4-chlorophenyl)thioglycol-p-phenetidide; S-(4-chlorophenyl)thioglycol-m-toluidine; 1-(2-chlorophenyl)urea; 3-isomer; 1,3-bis(2-chlorophenyl)urea; 3-isomer; cinnamic acid; cinnamoyl chloride; o-cresol; m-isomer; p-isomer; 4-dioxoacetyl chloride; cyanoacetamide; (2-cyclohexyl-4-chlorophenoxy)acetic acid; (decyl-mercapto)acetic acid; (decylsulfonyl)acetic acid; bis(2-acetoxyethyl) sulfone; 2,6-diaminopyridine monohydrochloride; 2,6-dibromo-4-carboxyphenyl phenylcarbamate; α , β -dibromodihydrocinnamic acid; 4,6-dibromo-1,3-dihydroxybenzene; (2,6-dibromo-4-methylphenoxy)acetic acid; 2,4-dibromophenyl phenylcarbamate; α , β -dibromo- γ -phenylpropionamide; bis(2-butyroxyethyl) sulfone; 2,5-dichloroanisole; 2,6-dichlorobenzenoneindophenol sodium salt; 2,5-dichlorobenzenesulfonamide; 2,5-dichlorobenzenesulfonyl chloride; (2,4-dichlorobenzylmercapto)acetic acid; bis(2,4-dichlorobenzyl) disulfide; 2,4-dichlorobenzyl mercaptan; bis(2,4-dichlorobenzyl) sulfide; bis(2,4-dichlorobenzyl) sulfone; 5,7-dichloro-3-coumaranone; N,2,4-trichloroacetanilide; 2,6-dichloro-3-ethyl-4-methylpyridine; 2,4-dichloroananderic acid; 2,6-dichloro-4-methyl-5-ethylnicotinamide; (2,6-dichloro-4-methylphenoxy)acetic acid; (2,4-dichloro-6-methylphenoxy)acetyl chloride; (2,4-dichloro-1-naphthoxy)acetic acid; 2,4-dichlorophenetole; 2,4-dichlorophenol; 1-(2,4-dichlorophenoxyacetamido)anthraquinone; 2-(2,4-dichlorophenoxyacetamido)anthraquinone; (2,6-dichlorophenoxy)acetic acid; 3,5-isomer; α -(2,4-dichlorophenoxy)-4-bromoanilide; α -(2,4-dichlorophenoxy)-4-chloroacetanilide; α -(2,4-dichlorophenoxy)-p-acetophenetide; α -(2,4-dichlorophenoxy)-N-(2-hydroxyethyl)acetamide; 2,4-dichlorophenoxyacet-1-naphthalide; α -(2,4-dichlorophenoxy)-2-nitroacetanilide; α -(2,4-dichlorophenoxy)-3-nitroacetanilide; 1-(2,4-dichlorophenoxyacetyl)-2-(p-nitrophenyl)hydrazine; α -(2,4-dichlorophenoxy)-N-2'-pyridylacetamide; α -(2,4-dichlorophenoxy)-2,4,6-trichloroacetanilide;

2-(2,4-dichlorophenoxyacetamido)-6,8-naphthalenedisulfonic acid;
 1-(2,4-dichlorophenoxyethyl)-1-phenylsemicarbazide;
 (2,4-dichlorophenoxy)(p-chlorophenyl)acetic acid;
 1-(2,4-dichlorophenoxy)-2,3-epoxypropane; (2,4-dichlorophenoxy) fumaric acid;
 Addnl. information in printed abstract

INDEX TERM: Weed control
 (growth substances in, testing on broadleaf plants)

INDEX TERM: Fluoborates
 (of organic bases, growth inhibition of plants by)

INDEX TERM: Plant regulators
 (reviews on)

INDEX TERM: 1,3-Propanediol, 2-(p-aminobenzylamino)-2-(hydroxymethyl)-, dihydrochloride
 1-Naphthaleneacetic acid, ar-chloro-
 1-Naphthaleneacetic acid, ar-chloro-, ammonium salt
 2-Naphthol-3,6-disulfonic acid, carbanilate, disodium salt
 2',4'-Benzoylidide, 4'-nitro-
 Acetamide, 2-(2,5-dichlorophenylthio)-N,N-diphenyl-
 Acetamide, 2-(4,?,?-trichloro-o-tolyloxy)-
 Acetamide, 2-(4,?,?-trichloro-o-tolyloxy)-
 Acetamide, N,N'-(4-methyl-m-phenylene)bis[2-(2,4-dichlorophenoxy)-
 Acetamide, N-amidino-2-(2,4-dichlorophenoxy)-
 Acetic acid, (4,?,?-trichloro-o-tolyloxy)-
 Acetic acid, (tribromoxylloxy)-
 Acetic acid, [2-bromo-2-chlorophenoxy]-
 Acetic acid, [4-bromo-4-chlorophenoxy]-
 Aniline, fluoborate
 Aniline, m-bromo-, fluoborate
 Benzoic acid, bromodichloro-, pentachlorophenyl ester
 Butylamine, compound with HgCl₂
 Butyric acid, sulfonyldiethylene ester
 Carbanilide, ar',2,5-trichloro-
 Ethylenediamine, N,N-bis[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]-, dihydrochloride
 Glutaconic acid, cyanoethyl-3-methyl-, diethyl ester
 Glycine, 2-(2,4-dichlorophenyl)-
 Glycolic acid, α -carboxy-3,5-dichloro-o-anisate
 Glycolic acid, α -carboxy-5-chloro-3-methyl-o-anisate
 Indophenol, 2,6(or 3',5')-dichloro-, sodium salt
 Nicotinonitrile, 5-ethyl-2,6-dihydroxy-4-methyl-, 6-mono-
 Phenol, p-bromo-, carbamates
 Quinic acid, ethyl ester
 Sulfamic acid, (2,4,6-trichlorophenyl)-, sodium salt
 Urea, (2-diethylamino-2-ethylbutyryl)-
 Urea, (chlorophenyl)(2,5-dichlorophenyl)-
 o-Anisic acid, α -carboxy-3,5-dichloro-, carboxymethyl ester
 o-Anisic acid, α -carboxy-5-chloro-3-methyl-, carboxymethyl ester
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INDEX TERM: 5438-19-7, Benzoic acid, p-propoxy- 15872-42-1, Benzoic acid, p-(heptyloxy)-
 (alkylaminoalkyl ester hydrochlorides, growth inhibition of plants by)

INDEX TERM: 619-86-3, Benzoic acid, p-ethoxy-
 (alkylaminoalkyl ester, hydrochlorides, growth inhibition

of plants by)

INDEX TERM: 1498-96-0, Benzoic acid, p-butoxy-
(alkylaminoalkyl esters and their hydrochlorides, growth
inhibition of plants by)

INDEX TERM: 83-56-7, 1,5-Naphthalenediol
(and chlorinated derivs., growth inhibition of
plants by)

INDEX TERM: 88-82-4, Benzoic acid, 2,3,5-triiodo- 573-54-6, Benzoic
acid, 2-bromo-3-nitro- 943-14-6, Benzoic acid,
2-bromo-5-nitro- 16426-64-5, Benzoic acid,
2-bromo-4-nitro-
(and derivs., growth inhibition of plants by)

INDEX TERM: 93-76-5, Acetic acid, (2,4,5-trichlorophenoxy)-
(and esters, and hydrazides, growth inhibition of
plants by)

INDEX TERM: 79-11-8, Acetic acid, chloro- 83-40-9, 2,3-Cresotic acid
88-06-2, Phenol, 2,4,6-trichloro- 94-74-6, Acetic acid,
(4-chloro-o-tolylxy)- 120-83-2, Phenol, 2,4-dichloro-
10129-78-9, Acetic acid, (2,4-dibromophenoxy)- 13333-87-4,
Acetic acid, (4,6-dichloro-o-tolylxy)- 13334-49-1, Acetic
acid, 2,4-xylyloxy- 19094-75-8, Acetic acid,
(6-chloro-o-tolylxy)- 28203-59-0, Acetic acid,
(benzylsulfonyl)- 105041-59-6, Acetic acid,
(4-chloro-2-propylphenoxy)-
(and esters, growth inhibition of plants by)

INDEX TERM: 108-95-2, Phenol
(as growth inhibitor for plants)

INDEX TERM: 583-23-3, Acetic acid, (2-chloro-p-tolylxy)- 588-20-5,
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(4-chloro-2-cyclohexylphenoxy)- 102237-13-8, Acetic acid,
(4-chloro-2-pentylphenoxy)- 439675-58-8, Acetic acid,
(4-chloro-2-iodophenoxy)- 501008-64-6, Acetic acid,
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INDEX TERM: 90-15-3, 1-Naphthol 122-59-8, Acetic acid, phenoxy-
135-19-3, 2-Naphthol 940-64-7, Acetic acid, p-tolylxy-
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INDEX TERM: 120-80-9, Pyrocatechol
(as plant-growth regulator)

INDEX TERM: 69-72-7, Salicylic acid
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by)

INDEX TERM: 328-42-7, Oxalacetic acid
(cyclic derivative with aminoguanidine growth inhibition of
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INDEX TERM: 98-67-9, 1-Phenol-4-sulfonic acid
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INDEX TERM: 94-75-7, Acetic acid, (2,4-dichlorophenoxy)-
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INDEX TERM: 50-29-3, Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)-
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INDEX TERM: 75-13-8, Isocyanic acid 501-82-6, Carbanilic acid
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INDEX TERM: 10200-98-3, 1-Propanol, 2-butylamino-2-methyl-
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INDEX TERM: 6117-91-5, 2-Buten-1-ol
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INDEX TERM: 131-08-8, 2-Anthraquinonesulfonic acid, sodium salt
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INDEX TERM: 858817-33-1, Acetamide,
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INDEX TERM: 860432-82-2, Sulfanilic acid,
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 501008-72-6, Urea, 1-[o-chlorophenyl]-3-(2-hydroxyethyl)-
 501008-73-7, Acetanilide,
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 501008-86-2, Acetic acid, (3-bromo-4-biphenylxyloxy)-, ethyl
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 855932-60-4, Acetanilide,
 4'-phenylazo-2-(2,4,5-trichlorophenoxy)- 855932-87-5,

Acetic acid, diphenyl-, 2-butylaminoethyl ester, hydrochloride 855938-32-8, Acetyl chloride, (6-chloro-o-tolyl oxy)- 856065-05-9, Naphthionic acid, N-(2,4-xylyloxyacetyl)- 856077-50-4, 2-Naphthoic acid, 3-isopropoxy- 856077-84-4, 2-Naphthoic acid, 3-propyl- 856187-93-4, Mercury chloride, HgCl₂, compound with 2,5-dichloroaniline 856187-93-4, Aniline, 2,5-dichloro-, compound with HgCl₂ 856188-04-0, Mercury chloride, HgCl₂, compound with BunH₂ 856189-54-3, Acetic acid, [p-(chloromercuri)phenoxy]- 856189-54-3, Mercury, [p-(carboxymethoxy)phenyl]-, chloride 856196-86-6, 1,3-Naphthalenedisulfonic acid, 7-[2-(4-chloro-o-tolyl oxy)acetamido]- 856375-14-9, Ethanol, 2-ethylamino-, diphenylacetate, hydrochloride 856375-14-9, Acetic acid, diphenyl-, 2-ethylaminoethyl ester, hydrochloride 856818-13-8, 1-Propanol, 2-methyl-2-propylamino-, p-(heptyloxy)benzoate, hydrochloride 856837-76-8, Picric acid, carbamate 857005-43-7, p-Tolylhydroquinone, di-1-naphthalene carbamate 857230-61-6, Propionamide, 2-amino-3-(2,4-dichlorophenoxy)- 857233-22-8, 1-Propanol, 2-hexylamino-2-methyl-, p-ethoxybenzoate, hydrochloride 857236-06-7, 1,3-Propanediol, 2-[benzyl[2-hydroxy-3-[(2-hydroxy-1,1-bis(hydroxymethyl)-ethyl]amino]propyl]amino]-2-(hydroxymethyl)- 857236-06-7, 2-Propanol, 1-[benzyl[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]amino]-3-[(2-hydroxy-1,1-bis(hydroxymethyl)ethyl]amino]- 857534-29-3, Benzanilide, 2,2'-dibromo-3,5-dichloro- 857534-53-3, Benzanilide, 2-bromo-3,3',5-trichloro- 857537-48-5, Benzoic acid, 3,5-dibromo-4-hydroxy-, carbanilate 857538-83-1, Benzoic acid, p-hydroxy-, carbanilate 857556-10-6, Acetic acid, diphenyl-, 2-butylaminoisobutyl ester, hydrochloride 857568-90-2, m-Acetotoluidide, 2-(6-chloro-o-tolyl oxy)- 857569-68-7, p-Acetotoluidide, 2-(6-chloro-o-tolyl oxy)- 857570-53-7, Acetyl bromide, (2,4-dichlorophenoxy)- 857599-60-1, o-Anisic acid, α -carboxy-3-methyl-5-nitro-, carboxymethyl ester 857599-60-1, Glycolic acid, α -carboxy-3-methyl-5-nitro-o-anisate 857599-65-6, o-Anisic acid, α -carboxy-, carboxymethyl ester 857599-65-6, Glycolic acid, α -carboxy-o-anisate 857599-95-2, p-Anisic acid, 2-butylaminoethyl ester, hydrochloride 857602-97-2, Anthraquinone, 2-[2-(biphenyloxy)acetamido]- 857641-33-9, Aniline, p-chloro-, fluoborate 857943-96-5, Acetamide, 2-(2,4-dichlorophenoxy)-N-[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]- 857949-00-9, Acetanilide, 2',5'-dichloro-2-(6-chloro-o-tolyl oxy)- 857949-73-6, Acetanilide, 2-(4,6-dichloro-o-tolyl oxy)- 857949-80-5, Acetanilide, 2',5'-dichloro-2-(2-methoxy-p-tolyl oxy)- 857953-58-3, Acetanilide, N-2-naphthyl-2-(2,4-xylyloxy)- 858030-92-9, 2-Naphthol-7-sulfonic acid, carbanilate, sodium salt 858197-05-4, Mercury, (5-chloro-2-hydroxy-4-biphenylyl)-, hydroxide 858197-05-4, Phenol, 4-chloro-5-(hydroxymercury)-2-phenyl- 858200-46-1, 1,3-Naphthalenedisulfonic acid, 7-[2-(2,4-dichlorophenoxy)acetamido]- 858201-43-1, 1-Naphthalenesulfonic acid, 8-[2-(2,4-dichlorophenoxy)acetamido]- 858440-57-0,

4-Morpholine ethanol, β, β -bis(hydroxymethyl)-, hydrochloride 858440-57-0, 1,3-Propanediol, 2-(hydroxymethyl)-2-morpholino-, hydrochloride 858465-03-9, 1-Naphthalenesulfonic acid, 8-[2-(4-chloro-o-tolyloxy)acetamido]- 858465-05-1, 1-Naphthalenesulfonic acid, 2-[2-(4-chloro-o-tolyloxy)acetamido]- 858465-07-3, 1-Naphthalenesulfonic acid, 8-[2-(p-chlorophenoxy)acetamido]- 858465-83-5, 1-Naphthalenesulfonic acid, [2-(2,4,6-trichlorophenoxy)acetamido]- 858479-83-1, Semicarbazide, 1-[(2,4-dichlorophenoxy)acetyl]-1-phenyl- 858817-59-1, Acetamide, N-butyl-2-(4,6-dichloro-o-tolyloxy)- 858818-30-1, Acetamide, 2-(p-chlorophenoxy)-N-[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]-N-[2-hydroxy-3-[2-hydroxy-1,1-bis(hydroxymethyl)ethylamino]propyl]-, hydrochloride 858818-74-3, Acetamide, 2-(4-chloro-o-tolyloxy)-N,N-bis(2-hydroxyethyl)- 859053-22-8, 1,3-Propanediol, 2,2'-(2-aminoethylimino)bis[2-(hydroxymethyl)-, dihydrochloride 859053-65-9, 1,3-Propanediol, 2-(2,3-dibromopropylamino)-2-methoxy-, hydrobromide 859054-09-4, 1,3-Propanediol, 2,2'-(hexamethylenediimino)bis[2-(hydroxymethyl)-, dihydrochloride 859061-06-6, Pseudourea, 2-[(2,4-dichlorophenoxy)acetyl]-2-thio- 859326-46-8, Urea, 1-(6-amino-2-pyridyl)-3-phenyl- 859733-19-0, Urea, 1,1-bis(2,2,2-trichloro-1-hydroxyethyl)- 859781-57-0, 2,4-Xylenol, 1-naphthalenecarbamate 859996-47-7, Nicotinonitrile, 5-ethyl-2,6-dihydroxy-4-methyl-, dicarbanilate 860364-55-2, 1-Naphthol-3,6-disulfonic acid, 8-[2-(p-chlorophenoxy)acetamido]- 860433-04-1, Sulfanilic acid, N-p-nitrobenzoyl-, potassium salt 860507-42-2, Salicylic acid, 1-naphthalenecarbamate 860695-83-6, Benzoic acid, o-butoxy-, 2-isopropylaminoethyl ester, hydrochloride 860696-02-2, Benzoic acid, o-(butylthio)-, 2-butylaminoethyl ester 860697-61-6, Benzoic acid, p-[1-(o-chlorophenyl)ureido]- 860699-32-7, Benzoic acid, p-pentyloxy-, 2-butylamino-2-methylpropyl ester, hydrochloride 860701-92-4, Betaine hydrazide, N1-(2,4-dichlorophenoxyacetyl)- 861057-15-0, Acetamide, N,N-diphenyl-2-(2,4,5-trichlorophenylthio)- 861058-16-4, Acetamide, N-[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]-2-(2,4,5-trichlorophenoxy)- 861058-18-6, Acetamide, N-[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]-N-[2-hydroxy-3-[2-hydroxy-1,1-bis(hydroxymethyl)ethylamino]propyl]-2-(2,4,5-trichlorophenoxy)-, hydrochloride 861058-27-7, Acetamide, N-2-hydroxyethyl-2-(2,4,5-trichlorophenylthio)- 861058-92-6, Acetamide, N,N'-m-phenylenebis[2-(2,4,5-trichlorophenoxy)- 861065-42-1, Acetic acid, (p-dithiocarboxyaminophenyl)-, sodium salt 861065-76-1, Acetic acid, diphenyl-, 2-pentylaminoethyl ester, hydrochloride 861066-09-3, Acetic acid, (1-naphthylxy)-, ammonium salt 861066-48-0, Acetic acid, (5-nitro-2-pyridyloxy)- 861067-14-3, Acetic acid, (2,4,5-trichlorophenylthio)-, ethyl ester 872306-95-1, Heptanoic acid, 2-(4-chloro-o-tolyloxy)-, ethyl ester 872306-96-2, Heptanoic acid, 2-(p-chlorophenoxy)- 872799-52-5, 1-Naphthol-3,6-disulfonic acid,

8-[2-(2,4-dichlorophenoxy)acetamido]- 873396-39-5,
 1,3-Propanediol, 2-(hydroxymethyl)-2-(p-nitrobenzylamino)-
 873990-90-0, o-Anisic acid,
 α -carboxy-5-chloro-3-methyl- 874006-20-9, Glycolic
 acid, 5-bromo-2-(carboxymethoxy)-m-toluate 874006-20-9,
 Glycolic acid, 5-bromo-2-(carboxymethoxy)-m-toluate
 874006-92-5, Heptanoic acid, 2-(4-chloro-o-tolyloxy)-
 874006-93-6, Heptanoic acid, 2-(p-chlorophenoxy)-, ethyl
 ester 874506-02-2, Sulfanilic acid,
 N-[2,4,6-trichlorophenoxy)acetyl]- 874506-02-2,
 Sulfanilic acid, N-[2,4,6-trichlorophenoxy)acetyl]-
 875245-95-7, o-Anisic acid,
 5-bromo- α -carboxy-3-methyl- 875247-30-6, Heptanoic
 acid, 2-(2,4-dichlorophenoxy)- 875248-61-6, Hydroquinone,
 bis(1-naphthalene carbamate) 875248-61-6, Hydroquinone,
 bis(1-naphthalene carbamate) 875257-87-7, Acetamide,
 N,N'-p-phenylenebis[2-(2,4,5-trichlorophenoxy)-
 875816-27-6, Acetic acid, (2-sec-butyl-4-chlorophenoxy)-,
 ethyl ester 875817-47-3, Acetic acid,
 [4-chloro-2-(2,3-dichloropropyl)phenoxy]- 875820-90-9,
 Acetamide, N,N-diphenyl-2-(2,4,5-trichlorophenoxy)-
 875820-90-9, Acetamide,
 N,N-diphenyl-2-(2,4,5-trichlorophenoxy)- 878762-59-5,
 Ethanol, 2-isobutylamino-, p-butoxybenzoate, hydrochloride
 878762-59-5, Ethanol, 2-isobutylamino-, p-butoxybenzoate,
 hydrochloride 902273-44-3, Fumaric acid,
 (4-chloro-o-tolyloxy)-
 (growth inhibition of plants by)
 INDEX TERM: 847643-09-8, Carbanilic acid, p-(carboxymethyl)dithio-,
 sodium salt 855935-12-5, Acetanilide,
 2',4',6'-trichloro-2-(p-chlorophenoxy)-
 (growth inhibition of plants, by)
 INDEX TERM: 643-43-6, Acetic acid, (2,4-dinitrophenyl)-
 (growth substance activity of)
 INDEX TERM: 66-22-8, Uracil
 (growth-inhibiting effect on plants)
 INDEX TERM: 109-56-8, Ethanol, 2-isopropylamino-, butoxybenzoates
 (hydrochlorides, growth inhibition of plants
 by)
 INDEX TERM: 68-35-9, Sulfadiazine 74-11-3, Benzoic acid, p-chloro-
 121-57-3, Sulfanilic acid
 (plant growth inhibition by)
 INDEX TERM: 553-82-2, Anisole, 2,4-dichloro-
 (plant growth-regulating effect of)
 INDEX TERM: 51-79-6, Carbamic acid, ethyl ester 57-67-0,
 Sulfaguanidine 127-79-7, Sulfamerazine 144-83-2,
 Sulfapyridine 7163-25-9, 2-Naphthoic acid, 3-hydroxy-,
 ethyl ester
 (plant-growth inhibition by)
 INDEX TERM: 776-75-0, Benzoic acid, piperide
 (plant-growth-inhibition by)
 INDEX TERM: 7145-91-7P, 1,3-Propanediol,
 2,2-[(2-hydroxymethylene)diimino]bis[2-(hydroxymethyl)-],
 dihydrochloride 146903-27-7P, Acetamide,
 N,N'-p-phenylenebis[2-(p-chlorophenoxy)- 162086-24-0P,
 Acetamide, N,N'-m-phenylenebis[2-(p-chlorophenoxy)-
 872287-85-9P, 2,5-Cyclohexadien-1-one,
 4-methyl-4-(trichloromethyl)-, O-(carboxymethyl)oxime
 872287-85-9P, Hydroxylamine,
 O-(carboxymethyl)-N-[4-methyl-4-(trichloromethyl)-2,5-

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cyclohexadien-1-ylidene]- 872287-85-9P, Acetic acid,
[4-methyl-4-(trichloromethyl)-2,5-cyclohexadien-1-

ylideneamino-oxy]-

ROLE: PREP (Preparation)

(preparation of)

INDEX TERM: 63-74-1, Sulfanilamide
(toxicity of, to plants)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4
CITINGS)

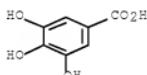
DATE LAST CITED: Date last citing reference entered STN: 16 Feb 2009

OS.CITING.REFS: CAPLUS 2006:908710; 2005:479312; 2000:148019; 1997:698412

IT 149-91-7, Gallic acid
(growth inhibition of plants by)

RN 149-91-7 ZCAPLUS

CN Benzoic acid, 3,4,5-trihydroxy- (CA INDEX NAME)



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=> d his full

(FILE 'HOME' ENTERED AT 09:34:49 ON 28 AUG 2009)

FILE 'REGISTRY' ENTERED AT 09:34:56 ON 28 AUG 2009

L1 STRUCTURE UPLOADED
L2 STRUCTURE UPLOADED
L3 50 SEA SSS SAM L1 AND L2
 D STAT QUE
L4 0 SEA SSS SAM L2
L5 6619 SEA SSS FUL L1 AND L2
 SAVE TEMP L5 BRO211LL2/A

FILE 'ZCAPLUS' ENTERED AT 09:44:03 ON 28 AUG 2009

L6 26435 SEA SPE=ON ABB=ON PLU=ON L5
 E US2004-810211 /APPS
L7 1 SEA SPE=ON ABB=ON PLU=ON US2004-810211 /AP
 D SCA
 SEL RN

FILE 'REGISTRY' ENTERED AT 09:46:38 ON 28 AUG 2009

L8 4 SEA SPE=ON ABB=ON PLU=ON (1132-21-4/B1 OR 141112-29-0/B1 OR
 173159-57-4/B1 OR 530-57-4/B1)
 D SCA
L9 1 SEA SPE=ON ABB=ON PLU=ON 141112-29-0
L10 1 SEA SPE=ON ABB=ON PLU=ON 173159-57-4
L11 2 SEA SPE=ON ABB=ON PLU=ON (L9 OR L10)

FILE 'ZCAPLUS' ENTERED AT 09:49:52 ON 28 AUG 2009

 E HERBICIDE ANTIDOTES+ALL/CT
 E E7+ALL/CT

L12 1573854 SEA SPE=ON ABB=ON PLU=ON ?PLANT?/BI
L13 374345 SEA SPE=ON ABB=ON PLU=ON ?SEED?/BI
L14 222949 SEA SPE=ON ABB=ON PLU=ON ?PROPAGAT?/BI
L15 95842 SEA SPE=ON ABB=ON PLU=ON ?HERBICID?/BI
L16 610849 SEA SPE=ON ABB=ON PLU=ON ?ICID?/BI
L17 13955 SEA SPE=ON ABB=ON PLU=ON ?BIOCID?/BI
L18 67493 SEA SPE=ON ABB=ON PLU=ON AGRO?/BI
L19 99601 SEA SPE=ON ABB=ON PLU=ON AGRI?/BI
L20 959 SEA SPE=ON ABB=ON PLU=ON ?SAFENER?/BI
L21 63339 SEA SPE=ON ABB=ON PLU=ON ?ADJUVANT?/BI
L22 7342 SEA SPE=ON ABB=ON PLU=ON ?ANTIDOTE?/BI
L23 353363 SEA SPE=ON ABB=ON PLU=ON 5/CC, SX, SC
L24 462 SEA SPE=ON ABB=ON PLU=ON L11
L25 298 SEA SPE=ON ABB=ON PLU=ON ?PHYTOCID?/BI
L26 25907 SEA SPE=ON ABB=ON PLU=ON WEED CONTROL?/BI
L27 268 SEA SPE=ON ABB=ON PLU=ON WEEDICID?/BI
L28 2 SEA SPE=ON ABB=ON PLU=ON L6 AND L20
L29 125 SEA SPE=ON ABB=ON PLU=ON L6 AND L21
L30 15 SEA SPE=ON ABB=ON PLU=ON L6 AND L22
 D SCA
L31 3 SEA SPE=ON ABB=ON PLU=ON L30 AND L23
 D SCA L28
L32 5730 SEA SPE=ON ABB=ON PLU=ON L6 AND ((L12 OR L13 OR L14 OR L15
 OR L16 OR L17 OR L18 OR L19) OR L21 OR (L23 OR L24 OR L25 OR
 L26 OR L27))
L33 1295 SEA SPE=ON ABB=ON PLU=ON L32 AND P/DT
L34 4435 SEA SPE=ON ABB=ON PLU=ON L32 NOT L33

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L35	2914	SEA	SPE=ON	ABB=ON	PLU=ON	L34	AND	PY<2004				
L*** DEL	2709	S	L34	AND	PY<2003							
L36	635	SEA	SPE=ON	ABB=ON	PLU=ON	L33	AND	PRD<20030326				
L37	620	SEA	SPE=ON	ABB=ON	PLU=ON	L33	AND	AD<20030326				
L38	541	SEA	SPE=ON	ABB=ON	PLU=ON	L33	AND	PD<20030326				
L39	3584	SEA	SPE=ON	ABB=ON	PLU=ON	(L35	OR	L36	OR	L37	OR	L38)
L40	56	SEA	SPE=ON	ABB=ON	PLU=ON	L39	AND	L15				

FILE 'REGISTRY' ENTERED AT 10:07:45 ON 28 AUG 2009

P SCA L9

P SCA L8

L41 1 SEA SPE=ON ABB=ON PLU=ON L8 AND 5/O
D SCA
D IDE

FILE 'ZCPLUS' ENTERED AT 10:09:09 ON 28 AUG 2009

L42	675	SEA	SPE=ON	ABB=ON	PLU=ON	L41 AND L39
L43	136	SEA	SPE=ON	ABB=ON	PLU=ON	L5 (L) AGR/RL
L44	95	SEA	SPE=ON	ABB=ON	PLU=ON	L43 AND P/DT
L45	41	SEA	SPE=ON	ABB=ON	PLU=ON	L43 NOT L44
L46	20	SEA	SPE=ON	ABB=ON	PLU=ON	L45 AND PY<2004
L47	41	SEA	SPE=ON	ABB=ON	PLU=ON	L44 AND PRD<20030326
L48	30	SEA	SPE=ON	ABB=ON	PLU=ON	L44 AND PD<20030326
L49	41	SEA	SPE=ON	ABB=ON	PLU=ON	L44 AND AD<20030326
L50	61	SEA	SPE=ON	ABB=ON	PLU=ON	(L46 OR L47 OR L48 OR L49)
L51	3586	SEA	SPE=ON	ABB=ON	PLU=ON	L50 OR L39
L52	675	SEA	SPE=ON	ABB=ON	PLU=ON	L51 AND L41
L53	12	SEA	SPE=ON	ABB=ON	PLU=ON	L50 AND L41
L54	2709	SEA	SPE=ON	ABB=ON	PLU=ON	L34 AND PY<2003
L55	3379	SEA	SPE=ON	ABB=ON	PLU=ON	L54 OR (L36 OR L37 OR L38)
L56	17	SEA	SPE=ON	ABB=ON	PLU=ON	L45 AND PY<2003
L57	58	SEA	SPE=ON	ABB=ON	PLU=ON	L56 OR (L47 OR L48 OR L49)
L58	3381	SEA	SPE=ON	ABB=ON	PLU=ON	L55 OR L57
L59	12	SEA	SPE=ON	ABB=ON	PLU=ON	L58 AND (L41 (L) AGR/RL)
L60	10	SEA	SPE=ON	ABB=ON	PLU=ON	L59 AND L23

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L*** DEL      0 S L60 NOT L59
L61          2 SEA SFE=ON ABB=ON PLU=ON L59 NOT L60
              D SCA
              E CEREAL+ALL/CT
              E E2+ALL/CT

```

L62	39073	SEA	SPE=ON	ABB=ON	PLU=ON	ZEA MAYS?/BI
L63	31320	SEA	SPE=ON	ABB=ON	PLU=ON	TRITICUM AESTIVUM/BI
L64	18095	SEA	SPE=ON	ABB=ON	PLU=ON	SORGHUM/BI
L65	4291	SEA	SPE=ON	ABB=ON	PLU=ON	SECALE CEREALE/BI
L66	5269	SEA	SPE=ON	ABB=ON	PLU=ON	PANICUM/BI
L67	16049	SEA	SPE=ON	ABB=ON	PLU=ON	HORDEUM VULGARE/BI
L68	2362	SEA	SPE=ON	ABB=ON	PLU=ON	FAGOPYRUM ESCULENTUM/BI
L69	47260	SEA	SPE=ON	ABB=ON	PLU=ON	CEREAL?/BI
L70	57166	SEA	SPE=ON	ABB=ON	PLU=ON	BARLEY?/BI
L71	24491	SEA	SPE=ON	ABB=ON	PLU=ON	BRAN/BI
L72	143166	SEA	SPE=ON	ABB=ON	PLU=ON	CORN/BI
L73	45485	SEA	SPE=ON	ABB=ON	PLU=ON	ORYZA SATIVA/BI
L74	118899	SEA	SPE=ON	ABB=ON	PLU=ON	RICE/BI
L75	130626	SEA	SPE=ON	ABB=ON	PLU=ON	COTTON/BI
L76	139287	SEA	SPE=ON	ABB=ON	PLU=ON	SOYBEAN?/BI
L77	390	SEA	SPE=ON	ABB=ON	PLU=ON	L58 AND (L62 OR L63 OR L64 OR L65 OR L66 OR L67 OR L68 OR L69 OR L70 OR L71 OR L72 OR L73 OR L74 OR L75 OR L76)
L78	123	SEA	SPE=ON	ABB=ON	PLU=ON	L41 AND L77
L79	300	SEA	SPE=ON	ABB=ON	PLU=ON	L41 (L1 HCS/BI

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L80 8 SEA SPE=ON ABB=ON PLU=ON L77 AND L79
 D SCA
L81 2 SEA SPE=ON ABB=ON PLU=ON L80 AND L23
L82 3 SEA SPE=ON ABB=ON PLU=ON L80 AND 3/CC
L83 9058 SEA SPE=ON ABB=ON PLU=ON L5 (L) USES/RL
L84 89 SEA SPE=ON ABB=ON PLU=ON L83 AND L77
L85 10 SEA SPE=ON ABB=ON PLU=ON L84 AND L23
 D SCA
L86 5 SEA SPE=ON ABB=ON PLU=ON L77 AND (L26 OR L27)
 D SCA
L87 1 SEA SPE=ON ABB=ON PLU=ON L86 AND NEW GROWTH/TI
L88 7 SEA SPE=ON ABB=ON PLU=ON L5 (L) L21
L89 2 SEA SPE=ON ABB=ON PLU=ON L88 AND L58
 D SCA
L90 33 SEA SPE=ON ABB=ON PLU=ON L58 AND L21
L91 0 SEA SPE=ON ABB=ON PLU=ON L90 AND L23

FILE 'REGISTRY' ENTERED AT 11:05:21 ON 28 AUG 2009

FILE 'ZCPLUS' ENTERED AT 11:05:23 ON 28 AUG 2009

 D STAT QUE L28
 D STAT QUE L31
 D STAT QUE L59
 D STAT QUE L81
 D STAT QUE L82
 D STAT QUE L85
 D STAT QUE L87
L92 27 SEA SPE=ON ABB=ON PLU=ON L28 OR L31 OR L59 OR L81 OR L82 OR
 L85 OR L87
 D IALL HITSTR L92 1-27

FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file
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DICTIONARY FILE UPDATES: 26 AUG 2009 HIGHEST RN 1176333-21-3

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REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

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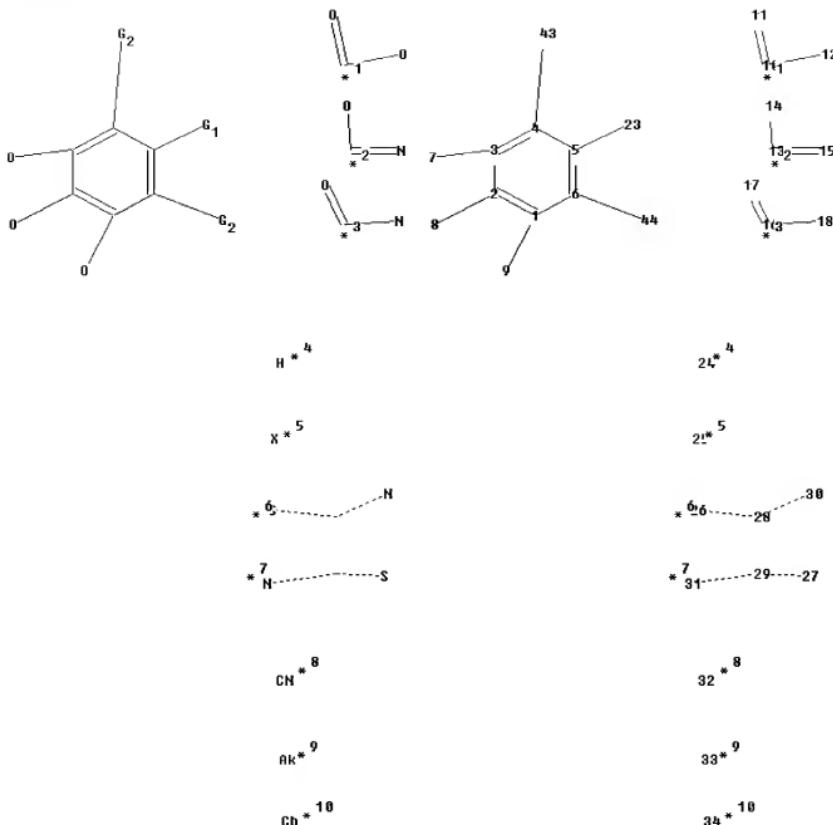
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chain nodes :=

chain nodes :

ring nodes :

```

ring nodes :
1 2 3 4 5 6
chain bonds :
1-9 2-8 3-7 4-43 5-23 6-44 10-11 10-12 13-14 13-15 16-17 16-18 26-28
27-29 28-30 29-31

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$z_7=29$ $z_8=30$

Fing bonds :

1=2 1=6 2=3

exact/norm bonds : 1-9 2-8 3-7 4-43 5-23 6-44 10-11 10-12 13-14 13-15 16-17 16-18 26-28
 27-29 28-30 29-31
 normalized bonds :

normalized bonds :

10/810211

1-2 1-6 2-3 3-4 4-5 5-6

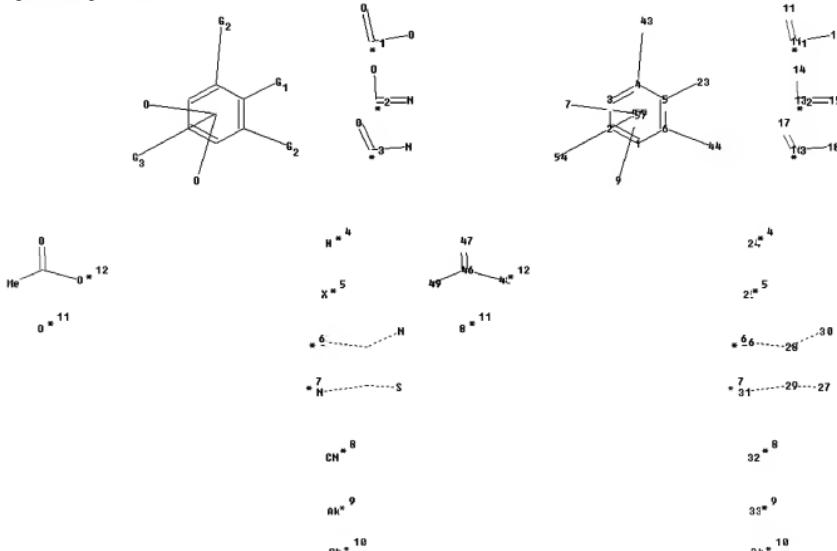
G1:[*1], [*2], [*3]

G2:[*4], [*5], [*6], [*7], [*8], [*9], [*10]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
23:CLASS 24:CLASS
25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS
33:CLASS 34:Atom
43:CLASS 44:CLASS

Uploading L2.str



chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 23 24 25 26 27 28 29 30 31
32 33 34 43 44 46 47 48 49 54

ring nodes :

1 2 3 4 5 6

chain bonds :

4-43 5-23 6-44 10-11 10-12 13-14 13-15 16-17 16-18 26-28 27-29 28-30
29-31 46-47 46-48 46-49

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

10/810211

4-43 5-23 6-44 10-11 10-12 13-14 13-15 16-17 16-18 26-28 27-29 28-30

29-31 46-47 46-48

exact bonds :

46-49

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

G1:[*1], [*2], [*3]

G2:[*4], [*5], [*6], [*7], [*8], [*9], [*10]

G3:[*11], [*12]

Connectivity :

8:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
23:CLASS 24:CLASS
25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS
33:CLASS 34:Atom
43:CLASS 44:CLASS 46:CLASS 47:CLASS 48:CLASS 49:CLASS 54:CLASS 55:CLASS
56:CLASS 57:CLASS

=>